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CLINICAL INVESTIGATION ACTIVITY

DENTAL CONTINUING EDUCATION PREFERENCE SURVEY

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EXECUTIVE SUMMARY

In an effort to evaluate existing continuing education (CE) programs and to plan for future programs, the Chief of the U.S. Army Dental Corps directed the Dental Studies Division of the Health Care Studies and Clinical Investigation Activity to survey the perceived continuing dental education needs of non-specialty trained general dentists (63A00s and 63A9Ds), as well as what commanders and clinic chiefs felt the general dentists needed.

Questionnaires were distributed to general dentists, commanders, and clinic chiefs worldwide between June and July 1990. Respondents were asked to rank 92 CE topics on a scale of one (no need) to four (high need) as well as to rank the six topics they felt were most needed. A total of 255 commanders/clinic chiefs and 528 general dentists provide completed questionnaires for analysis.

The response rate for this study was excellent, with over 70% of the commanders/clinic chiefs and nearly 78% of the general dentists eligible for the study responding to the questionnaires. In general, the majority of the respondents were satisfied with the Dental Corps' CE programs and viewed CE as important. Significant differences in the perceived need for CE topics exist between commanders/clinic chiefs and the general dentists. For general dentists, Advanced Education in General Dentistry training and years of experience (up to 6 years) were associated with CE preferences. As a group, 63A9Ds assigned to overseas installations

selected different CE topics than similarly assigned 63A00s, focusing mainly on Management Issues. General dentists assigned to clinics without specialty support had different CE preferences than those with support, with the emphasis on more basic specialty-related topics.

To address the educational needs of the general dentists as well as to meet the special dental needs of the military community, CE program planners, at every level of the Army Dental Health Care team, must give consideration to the differences in perceived needs that exist between the various groups cited in this report. In addition, these perceived needs should be reassessed on a regular basis.

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The authors wish to recognize the generous assistance of Colonel Gary Allen, former Chief, Graduate Dental Education for the U.S. Army Dental Corps, and Colonel Mac Edington, Consultant in General Dentistry to the U.S. Army Surgeon General, in developing the final continuing education questionnaire. A special thanks is also extended to Colonel Jay Shulman, Chief, Dental Studies Division, U.S. Army Health Care Studies and Clinical Investigation Activity for his extensive contributions during the analytical and manuscript preparation phases of this report.

Introduction and Overview

Purpose

This report presents the results of the 1990 Dental Continuing Education Preference Survey of non-specialty trained general dentists in the Army Dental Corps. It focuses on the preferences and perceived needs for continuing education of general dentists, as well as what commanders and clinic chiefs felt general dentists needed. It does not attempt to examine or measure the true needs of the general dentists. Variables associated with these preferences and perceived needs are also presented. This report provides the Army Dental Care System leadership with information needed to evaluate existing continuing education programs as well as plan for future programs.

Background

Prior to World War II, there was little perceived need by dentists for continuing education. Following the war, the need for continuing education became more apparent to the dentists returning from military service (Kress, 1979). What began as a sporadic series of refresher courses offered by a network of groups such as dental societies, study clubs, and dental schools, continuing education has now become an increasingly complex network of courses (Bird, 1976).

From the end of World War II until 1969, dental continuing education was voluntary. Since then, both state dental societies and state dental boards have imposed continuing education

requirements for membership and licensure (Block,1982). The American Dental Association also has endorsed participation in continuing education as an obligation of all dentists (ADA, 1978). The United States Army Dental Corps has long recognized the effect that continuing education has on the professional growth and development of its dental officers and has been a leading advocate for achieving professional excellence through continuing education (Ellinger, 1987). These requirements for continuing education were initiated on the assumption that continuing education serves as a mechanism for maintaining and improving a professional's abilities and influencing quality of care. This assumption prevails even though there is little direct evidence concerning the effects of continuing education on the practice of dentistry (Kress,1979). Most dentists accept the premise that continuing education has a vital role in influencing the practice of dentistry and therefore, continuing education must be well planned. For this to happen, it is essential to first determine the needs as perceived by dentists and to ensure that these needs can best be met by continuing education (Williamson, 1978).

The recent literature on assessing the need for continuing dental education is limited (Haroth, 1984; Rudd, 1984; Cafferata, 1975; Ross, 1981; Young, 1983), and many of the studies are not well documented. Four of the most recent surveys were conducted between 1981 and 1984 (Haroth,1984; Rudd, 1984; Ross, 1981; Young, 1983) while another was completed over a decade ago (Cafferata; 1975). Despite possible differences in topic content and

analytical methods, results from these surveys show some similarities. Subgroup analyses showed that there are differences in preferences along the following dimensions: general dentists and specialists (Cafferata, 1975; Ross, 1981), experience level or age (Cafferata, 1975; Ross, 1981; Young, 1983), urban and rural dentists (Ross, 1981), solo and group practitioners (Cafferata, 1975; Young, 1983), and whether or not the dentist attended professional meetings (Cafferata, 1975).

Methodology

Questionnaire Design

The questionnaire was designed by Dr. Michael Chisick, a member of the survey team, with assistance from the Chief, Graduate Education Branch, U.S. Army Health Professional Support Agency and the Consultant in General Dentistry to the U.S. Army Surgeon General. A copy of the survey instrument used in the Statewide Needs Assessment Program survey was obtained from the authors (Ross, 1981) and was modified for use in a military setting. Questions on personal and practice characteristics were added to provide a profile of Army general dentists and for use in subgroup analyses. The final questionnaire contained 92 continuing education topics (Appendix A).

Study Design

This cross-sectional study collected data from questionnaires mailed to dental officers, worldwide, between 7 June and 25 July,

1990. A survey letter of instruction and endorsement letters accompanied the questionnaires. Questionnaires were mailed to Dental Activity (DENTAC) commanders with instructions for distribution. A copy of the survey letter of instruction and endorsement letters appear in Appendices B and C, respectively.

There were two self-administered questionnaires, one for general dentists and one for dental clinic chiefs and DENTAC commanders. The two questionnaires were essentially the same, differing only in background information requested. All respondents were asked to rank 92 continuing education topics on a scale of one (no need) to four (high need) and to rank the six topics they felt were needed most. General dentists were asked questions relating to age, sex, professional history, and career plans, while commanders/clinic chiefs were asked about their attitudes towards continuing dental education.

The most significant contribution of this study is that, to date, no published research has dealt specifically with continuing education preferences and perceived needs of military general dentists.

Sample Size

Commander/Clinic Chief Questionnaires were distributed to all DENTAC and Dental Detachment commanders (58) worldwide. In addition, questionnaires were sent to Area Dental Laboratory (ADL) commanders (4), the Commander of the United States Army Institute of Dental Research (USAIDR), and key staff members throughout the Army Dental Corps (11). Because of their command and administrative experience, these individuals were included in the DENTAC Commander Group (74) for analysis. A total of 288 Commander/Clinic Chief Questionnaires were also distributed to clinic chiefs worldwide.[1]

The General Dentist Questionnaire was distributed to general dentists assigned to dental units as of June 1990.[2] This comprises 396 general dentists without additional training (63A00s) and 272 general dentists who had completed a general practice residency (63A9Ds).

The analysis was limited to completed questionnaires and included 55 commanders, 200 clinic chiefs, 332 63A00s, and 186 63A9Ds. These data are summarized in Table 1. Follow-up electronic mail messages were sent to all DENTAC commanders to

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[1]Commander/Clinic Chiefs questionnaires were distributed based on the U.S. Army Dental Corps roster of DENTACs and Dental Clinics provided by the Office of Graduate Dental Education 16 April 1990.

[2]General Dentist questionnaires were distributed, based on the number assigned to DENTACs and nearby divisional and USA units shown in the Dental Corps Authorized Versus Assigned Roster, 14 Mar 90 and information from AMEDD Personnel Proponency dated June 1990.

encourage responses from non-respondents.

Data Collection and Database Creation

Completed questionnaires were screened and edited by the Dental Studies Division, U.S. Army Health Care Studies and Clinical Investigation Activity and entered on computer tape through a contract monitored by the Health Care Systems Support Activity. Data analysis was performed using the Statistical Analysis System (SAS™) at the Fort Detrick Data Processing Installation and by Dental Studies personnel.

Data Analysis

The analysis involved four phases. Initially, the commander/clinic chief and general dentist questionnaires were analyzed separately with background descriptive statistics generated to establish a profile of respondents from these two groups. In the second phase, responses of commanders, clinic chiefs, 63A00s, and 63A9Ds were analyzed separately and where appropriate, comparisons between groups were made. All comparisons that were made involved comparing proportions of the four response groups that placed a subject among its top six choices or rated a top six subject as "high need". Two-tailed z-approximation tests for comparing proportions were employed since there was no a priori indication of the direction of the difference in proportions (Dawson-Saunders, 1990).

The third level of analysis compared responses of 63A00s and

63A9Ds while focusing on variables such as years of practice, area of assignment, residency preferences, military career aspirations, and availability/proximity of dental specialists.

The final phase of analysis involved several steps. Initially, the 92 topics from the questionnaires were grouped into 4 broad categories: clinical dentistry, medically related, clinic management, and alternate wartime training (see Table 2). In the second step, in order to make comparisons easier to discuss, responses for each of the 92 topics were standardized by converting the ordinal responses (no need, low need, moderate need, and high need) to interval values (0, 1, 2, and 3, respectively). Mean composite scores were then calculated for each question in the 4 response groups. It should be noted that no attempt is made to interpret or discuss differences between the rank order of the 92 topics based on these calculated mean composite scores as these scores represent an arbitrary way of ordering the ordinal responses to topics and do not represent the actual degree of importance.

Finally, mean composite responses for each question were ranked in each of the 4 categories and, where appropriate, comparisons of the rank-ordered mean responses were made between the response groups. Spearman's rank-order correlation analysis was used to measure the pairwise association between the rankings of the response groups (Hays, 1973). These four categories were chosen to reflect the major themes among the topics addressed in the questionnaires and the diversity found within the military general dentistry practice. Other equally appropriate groupings

could have been used.

Findings

Questionnaire Response Rates

Table 1 presents a summary of the respondents and response rates for each questionnaire. Completed questionnaires were received from 74.3% of the commanders and 69.4% of the clinic chiefs. The aggregate response rate for the Commander/Clinic Chief questionnaire was 70%.

Completed questionnaires were returned by 77.5% of the general dentists. A significantly higher proportion ($p < .0001$) of the 63A00s (.84) returned the questionnaire compared to the 63A9Ds (.68). The exact response rate for the two questionnaires cannot be accurately determined because the number of people actually receiving questionnaires is unknown. Thus, the response rates appearing in Table 1 are conservative estimates since they represent the largest possible denominator. This is to say that had more of the sampling frame of general dentists actually received questionnaires, the response rate would have been enhanced.

Respondent Characteristics

Commanders and Clinic Chiefs

Table 3 displays characteristics of the commanders and clinic chiefs. Overall, there was no significant difference in the percentage of commanders and clinic chiefs responding to the questionnaire. The majority of the respondents, 73% of the commanders and 61% of the clinic chiefs, were assigned to Continental US (CONUS) installations. These figures are fairly representative of the actual percentages, 66% of commanders and 63% of clinic chiefs, who are assigned to CONUS units. Table 3 also shows that compared to Outside Continental US (OCONUS) commanders, commanders who were included in the survey and assigned to CONUS had a greater response rate. For CONUS commanders, the 82% rate of response was significantly higher than the 60% of the OCONUS commanders ($p<.05$). For clinic chiefs, there was no significant difference in the response rates, 66% for CONUS versus 72% for OCONUS.

General Dentists

Table 4 presents selected characteristics of the general dentists involved in the study. The majority were assigned to CONUS installations, with a significantly higher proportion of the 63A00s serving in CONUS assignments compared to the 63A9Ds (.68 versus .58, $p<.01$). The general dentists ranged in age from 25 to 55 years with a mean of 33.6 years and a standard deviation of 4.7 years. They had spent between 0 and 30 years in dental practice

with a mean of 6.4 years and a standard deviation of 4.3 years. In general, the 63A00s were significantly older (mean age 34.3 versus 32.3 years, $p < .0001$) and had more years of dental practice (7.1 versus 5.1 years, $p < .0001$) than the 63A9Ds.

Both groups of general dentists had approximately the same percentage of males, 91.4% for the 63A9Ds and 90.0% for the 63A00s. Table 4 also shows that approximately 98% of both groups of general dentists possess state dental licenses and nearly 81% of the dentists participate in a self-directed continuing education program.

Finally, Table 4 displays the percentage of each group that expressed a preference for one of the dental specialty training programs. The plurality of each group, 27.7% for the 63A9Ds and 34.9% for the 63A00s, selected Comprehensive Dentistry as their specialty preference. For the 63A9Ds, orthodontics, periodontics, and prosthodontics were the next most frequently selected specialties. For the 63A00s, it was orthodontics, prosthodontics, and endodontics. Nearly 10% of the 63A9Ds and 13% of the 63A00s were undecided, and 5.4% of the 63A9Ds and 8.9% of the 63A00s expressed no interest in specialty training. Of those expressing no interest in specialty training, only one 63A9D and three 63A00s had 15 or more years of practice experience.

Questionnaire Responses

Commanders

Overall, 94.5% of the commanders strongly agreed that non-specialty trained general dentists need continuing education. Table 5 displays the six subject areas this group felt were most needed in continuing education. This list was derived from Questions 94 through 99 in the questionnaire in which respondents were asked to rank order the six topics of greatest need, and the six most frequently cited subjects were Medical Emergencies, Infection Control, Diagnosis/Treatment of Endodontic Problems, Oral Surgery for the General Practitioner, Diagnosis/Treatment of TMJ Problems, and Diagnosis/Treatment of Orofacial Infections.

Of these six subjects, Medical Emergencies was ranked as a topic most needed by slightly over 36% of the commanders. As Table 5 shows, 60% of the commanders responding felt there was a "high need" for topics concerning Medical Emergencies.

Infection Control was selected by over 16% of the commanders as a topic to be included in the top six list. Again, 60% of the commanders felt there was a "high need" for this subject.

Topics relating to the Diagnosis/Treatment of Endodontic Problems were ranked in the top six by over 16% of the commanders and 40% of all commanders perceived a "high need" for this subject.

Nearly 13% of the commanders placed Oral Surgery for the General Practitioner, Diagnosis/Treatment of TMJ Problems, and Diagnosis/Treatment of Orofacial Infections among the top six topics. A "high need" for Oral Surgery topics was perceived by 49%

of all respondents and approximately 53% of the commanders felt there was a "high need" for subjects relating to Orofacial Infection management. It is interesting to note that even though subjects relating to TMJ problems were ranked in the top six, only 16% of all responding commanders felt there was a "high need" for this topic.

In examining the aggregate responses of the commanders to each of the 92 topics, the subjects that were perceived to have a "low need" in the continuing education program for the non-specialty trained general dentist were TMJ Arthroscopy, Genetic Anomalies of Clinical Interest, Periodontal Disease in Children, Preventive Health and Nutrition, Dental Implants, and Major Aspects of Psychological Care. Also, over 98% of commanders rated the current continuing dental education courses offered to the 63A general dentist as either good or excellent.

Clinic Chiefs

Approximately 90% of this group strongly agreed that non-specialty trained general dentists need continuing education. This is lower than but not substantially different than the 94.5% reported above for the commanders. Table 6 displays the six subject areas that the clinic chiefs felt were most needed in continuing education. Their top six choices included Medical Emergencies, Oral Surgery for the General Practitioner, Medically Compromised Patients, Diagnosis/Treatment Orofacial Infections, Diagnosis/Treatment of TMJ Problems, and Diagnosis/Treatment of

Endodontic Problems.

For this group, Medical Emergencies and Oral Surgery for the General Practitioner were ranked among the top six topics by approximately 29%, and overall, 53% of the clinic chiefs felt that there was a "high need" for these subjects. Management of Medically Compromised Patients was considered by 21% to be important enough to be ranked among the top six subjects and 38.5% of responding clinic chiefs felt that there was a "high need" for this topic.

Management of Orofacial Infections was ranked among the top six choices by 19% of the clinic chiefs and viewed as a "high need" topic by 47.5% Although perceived by only 30.7% of the clinic chiefs as being a "high need" topic, Diagnosis/Treatment of TMJ Problems was ranked in the top six by nearly 15% of this group. And finally, Table 6 reveals that, while only 9.5% of the clinic chiefs felt that there was a "high need" for continuing education topics relating to the Diagnosis/Treatment of Endodontic Problems, 14% ranked it among the top six topics.

The topics that were perceived by the clinic chiefs as being of "low need" for the non-specialty general dentists were TMJ Arthroscopy, Genetic Anomalies of Clinical Interest, Periodontal Disease in Children, Major Aspects of Psychological Care, Periodontal Osseous Procedures, and Burns. Finally, nearly 86% of the clinic chiefs who responded rated the current continuing dental education courses offered by the Army Dental Corps for 63A00s and 63A9Ds as good or excellent.

Commanders/Clinic Chiefs Combined

The results of the combined responses of the commanders and clinic chiefs are presented in Tables 7 and 8. Table 7 shows the six most important topics that emerged from the combined responses. Table 8 summarizes the important topics by response group. As might be expected, this table reveals broad agreement between the commanders and clinic chiefs as to the most important areas to be included in a continuing education program for general dentists. The two groups agreed on 5 out of 6 topics with both groups seeing Management of Medical Emergencies as the most important area. They differed only in the inclusion of Infection Control on the commander's list while the clinic chief's list contained Management of Medically Compromised. The only significant statistical finding was the difference in the proportion of each group that rated Diagnosis/Treatment of TMJ Problems as "high need" (.16 for commanders versus .31 for clinic chiefs, $p<.031$). It is interesting to note that these two groups chose topics that were unrelated to restorative dentistry.

Table 9 reports a comparison of the individual and combined responses of the clinic chiefs and the commanders for the six topics that were perceived as "low need" for continuing education courses. There was general agreement between the two groups, 60% for all six topics and 100% agreement on the lowest three. These three areas in decreasing order were Periodontal Disease in Children, Genetic Anomalies of Clinical Interest, and TMJ Arthroscopy.

Finally, Table 10 shows that over 90% of the commanders/clinic chiefs rated the current continuing education program for the non-specialty trained general dentist as good or excellent.

All General Dentists

Among the non-specialty trained general dentists (all 63As) who responded to the questionnaire, 86.8% "strongly agreed" that they needed continuing dental education. This group, when viewed in the aggregate and not considering factors such as age, years of practice, 63A9D training, or career plans, selected the six topics listed in Table 11 as the ones needed most.

The most frequently selected subject was Oral Surgery for the General Practitioner. Nearly 22% of the general dentists placing this topic in the top six, while 41.3% felt there was a "high need" for this subject. How to Handle Difficult People was perceived as a "high need" area by 35.4% of the respondents, and was ranked in the top six choices by 16.5% of the 63As.

Dental Implants and Dental Esthetics were both ranked in the top six by nearly 15% and were perceived as "high need" by 34.6% and 37.5% respectively. Other topics in this ranked top six list included Management of Impactions/Complicated Extractions and Medical Emergencies. Even though Medical Emergencies was ranked in the top six by only 11.2% of the responding general dentists, this topic was rated as "high need" by the highest proportion of the general dentists (.44).

The topics that the non-specialty trained general dentists

perceived as being of "low need" were Sealants, TMJ Arthroscopy, Fluoride, Cavity Design, Preventive Health and Nutrition, Major Aspects of Psychological Care.

Overall, nearly 80% of all the general dentists (63A00s and 63A9Ds) rated the current continuing dental education courses offered by the Army Dental Corps as good or excellent.

General Dentists (63A00)

For the 63A00 group, 83.6% "strongly agreed" that they needed dental continuing education. Table 12 presents the rank order of the six topics that the 63A00s most frequently said they needed. Nearly 45% felt there was a "high need" for both Oral Surgery for the General Practitioner and Management of Impactions/Complicated Extractions, but Oral Surgery was included in the top six almost twice as frequently as Impactions (25.3% versus 13.0%). Question 88 dealt with management of difficult people, including patients, co-workers, and supervisors, and was the second most frequently ranked topic with 16.7% placing it in the top six.

The Diagnosis/Treatment of Orofacial Infections was perceived by nearly 46% of the 63A00s as being a "high need" topic while this subject was ranked among the top six topics by 14.4%. Nearly 12% of this group ranked Esthetics/Bonding and Dental Implants among the top choices and these topics were perceived as "high need" topics by 33.5% and 31.6%, respectively.

The six topics that this response group perceived as being of "low need" were Fluoride, TMJ Arthroscopy, Sealants, Cavity Design,

Preventive Health and Nutrition, Major Aspects of Psychological Care. Of the 63A00s responding to the questionnaire, 83.6% rated the current Army Dental Corps continuing education courses as good or excellent.

General Dentists (63A9D)

Over 92% of the 63A9Ds "strongly agreed" that they needed dental continuing education. Table 13 lists the top six topics chosen by the 63A9Ds. The most frequently selected topic (22.3%) was Esthetics/Bonding in Dentistry. Nearly 45% of the 63A9Ds perceived it as "high need". The second most frequently selected topic (17.4%) was Medical Emergencies which was rated as a "high need" topic by nearly 39% of the respondents.

Dental Implants and How to Handle Difficult People were included in the top six topics by 16.8% and 15.8% of the 63A9Ds respectively, and both topics were perceived as "high need" by approximately 39%.

Management of Impactions/Complicated Extractions was ranked among the top six subjects by 13.6% of the 63A9Ds and roughly 40% perceived this topic as "high need". Although the topic of Glass Ionomers was ranked among the top six topics by only 12% of the group, it was perceived as a "high need" topic by close to 44%.

The following six topics were most frequently selected by the 63A9Ds as being of "low need" in a continuing education program: Sealants, TMJ Arthroscopy, Preventive Health and Nutrition, Cavity Design, Fluoride, and Management of NBC Casualties. For

this group, 73.2% rated the Army Dental Corps continuing education courses as good or excellent.

Comparisons of Response Groups

63A9D and 63A00 Responses

A comparison of the top 6 topics by group (Table 14) shows that the combined response includes over 83% of the top six choices from both the 63A00 and the 63A9D lists presented in Tables 12 and 13. The 63A00s and the 63A9Ds agreed on 4 of 6 of their top subjects. However, there were significant differences among these agreed upon topics, both in the percentage placing them in the top six, as well as differences in the percentage rating them "high need". Management of Impactions/Complicated Extractions was placed in the top 6 by both groups, but a significantly greater proportion of the 63A00s rated it a high need subject than the 63A9Ds (.45 versus .34, respectively, $p<.02$). The same was true for Esthetics/Bonding except that not only did a greater proportion of the 63A9Ds rated it a high need subject (.45 versus .34, respectively, $p < .005$), a significantly larger proportion of the group placed it in the top 6 compared with the 63A00s (.22 versus .12, respectively, $p < .005$).

Table 15 reports a comparison of the individual and combined responses of the 63A00s and the 63A9Ds for the six topics that were perceived as being of "low need" for continuing education courses. Not surprisingly, there was general agreement between the two groups, with matching responses on 5 of 6 topics.

A comparison of how the two groups of general dentists rated the Army Dental Continuing Education Program is shown in Table 16. In general, over 70% of both groups rated the program good or excellent, with the proportion of 63A00s selecting either of these categories significantly higher than that of 63A9Ds (.84 versus .73, respectively, $p < .005$). Focusing on those who selected the excellent category, the 63A00s had a significantly greater proportion of responses (.35 versus .27, respectively, $p < .05$). Most respondents in both groups leaned towards a good rating of the Education Program (48% for 63A00s, 46% for 63A9Ds). The 63A9D group had a significantly greater proportion of its members choosing a fair rating compared to the 63A00s (.22 versus .13, respectively, $p < .005$).

Commanders/Clinic Chiefs, 63A00s and 63A9Ds

The top six selected topics of these three groups are presented in Table 17. The 63A00s agreed with the commanders on two topics, Oral Surgery for the General Practitioner and Management of Orofacial Infections, while the 63A9Ds shared only the choice of Medical Emergencies with the commanders. In general, there was little agreement between the general dentists and the commanders/clinic chiefs concerning subjects most needed in a continuing education program. A comparison of what the three groups perceived as "low need" is shown in Table 18. The only two topics that the groups agreed upon were TMJ Arthroscopy and Preventive Health/Nutrition.

General Dentists Responses: Selected Variables

Area of Assignment

Table 19 presents a comparison of the six most important topics listed by all 63As based on either a CONUS or an OCONUS duty assignment. When viewed in the aggregate, there was 83% agreement between these groups, and there were no significant differences in the proportion of respondents selecting the agreed upon topics. The agreed upon subjects included Esthetics/Bonding, How to Handle Difficult People, Oral Surgery for the General Practitioner, and Dental Implants.

Reviewing the results presented in Table 11 for all 63As and comparing them with Table 19, there is 100% agreement between the top six choices for all non-specialty trained dentists and the

OCONUS 63As.

The results presented in Table 20 show that the selections for the 63A9Ds and the 63A00s assigned to CONUS installations were similar, agreeing on 4 of 6 topics with no significant differences in the proportion of respondents choosing the agreed upon topics. There was also a 67% rate of agreement between the CONUS and the OCONUS 63A00s, again with no significant differences in response proportions.

The most striking feature in Table 20 is that the 63A9Ds and the 63A00s assigned to OCONUS installations selected totally different topics. The agreement proportion for the CONUS and the OCONUS 63A9Ds was only .33 (Esthetics/Bonding and Management Theory) and only .17 for the CONUS 63A00s and the OCONUS 63A9Ds (Esthetics/Bonding). Table 20 also shows that for the 63A00s, there was agreement on 4 of 6 topics which included Oral Surgery for the General Practitioner, Orofacial Infections, Medical Emergencies, and Dental Implants.

Table 20 also reveals that 67 per cent of the top six topics selected by the OCONUS 63A9Ds were related to clinic management issues. For the CONUS 63A9Ds, the CONUS 63A00s, and the OCONUS 63A00s, clinic management topics comprised 17, 17, and 0 per cents, respectively.

Years of Dental Practice

Tables 21 through 24 display the continuing education topics ranked among the top six choices by 63A groups based on years of dental practice.

For general dentists with two or fewer years of clinical experience, Table 21 reveals that the two 63A groups differ substantially in their subject choices, agreeing only on Implants as a topic to be included among the top 6 topics (17% agreement). The results for those with five or fewer years of practice are presented in Table 22 and reveal similar results as those presented for the two 63A groups with two or fewer years of practice. Again, Implants was the only topic agreed upon out of the top six (.17 agreement) and, there was no significant difference in the proportion of each group that selected Implants. This was also true for the 63A groups with two or fewer years of practice.

It appears that among the 63A00s, there is general agreement (83%) on selected top six topics regardless of years of experience up to 5 years (tables 21 and 22). This does not appear to be the case for the 63A9Ds, as Tables 21 and 22 reveal substantive differences in subjects selected and agreement on only 33% of the topics when comparing 63A9Ds with two or fewer with those with five or fewer years of experience.

As years of experience increased beyond five years, there was greater agreement among the two 63A groups. For 63A00s and 63A9Ds with six to ten years of experience, Table 23 shows that there was over 83% agreement on selected topics. Also, there was no

significant difference in the proportion of each group that selected any of the agreed upon topics. For those general dentists with more than ten years of clinical experience, Table 24 reveals that the two 63A groups agreed on 4 out of 6 topics. Again, for the agreed upon topics, there was no significant difference in the proportion of each group that selected the topic.

Residency Preferences

There was no significant difference in the proportion of the 63A9Ds (.95) and the proportion of 63A00s (.91) who expressed an interest in specialty training, and thus only the consolidated responses of the two 63A groups are reported. Even after excluding from the analysis all respondents who had 15 or more years of experience and might be expected not to seek residency training, there still was no significant difference in the proportion of the two 63As who expressed an interest in specialty training.

Table 25 presents a comparison of the top six continuing education subjects selected by the group of 63As who expressed no interest in residency training and the group with an interest. Overall, the two groups had a 67% rate of agreement, selecting Esthetics/Bonding, Difficult People, Medical Emergencies, and Dental Implants as mutual choices. In examining each of these four choices, there was no statistically significant difference in the proportion of each group that selected each topic to be placed on the top six list.

Reviewing the aggregate responses of top six choices for all

63As presented in Table 11 and comparing them with the results presented in Table 25, there was a 100% agreement between the aggregate choices of all 63As and the choices for the group with residency preferences. This suggests that the inclusion or exclusion of the respondents who indicated that they had no interest in residency training does not alter the results of the study appreciably and consequently, their responses were not excluded from the analysis.

Table 26 presents the top six continuing education topics for all 63As by residency preference. No results are presented for those selecting Oral Pathology (7) or Public Health (2) since the number of respondents for each of these selections was too small to make any analysis meaningful.

In general, among the residency specific top six choices presented in Table 26, there is a core of topics consisting of Oral Surgery, Medical Emergencies, and Implants, that remain from the aggregated 63A list (Table 11). In addition to this core, the remainder of the topics presented in Table 26 appear to express the residency interest of the respondents.

Military Career Aspirations

When asked if they planned to make the Army a career, slightly more than 46% of the respondents replied "yes, definitely", 23% said they were not sure but were "leaning towards staying in", 11% were not sure but were "leaning towards getting out", 10% were "unsure", and approximately 9% stated "no, definitely not". Table

27 shows the top six continuing education choices of these five groups and suggests that perceived continuing education needs vary with current military career plans. Subjects relating to Oral Surgery, How to Handle Difficult People, and Medical Emergencies were the only common topics among these five groups and only with various levels of agreement.

It is clear, that while the five career groups differ on subjects selected (Table 27), there are varying degrees of agreement between the five groups and the collective response of all 63As (Table 11). Rates of agreement varied from 33% for the "leaning towards getting out" group, to 67% for the "definitely yes", the "unsure", and the "definitely not" groups.

An overview of the frequency of responses for residency plans and years of practice by career choice is presented in Table 28. For both 63A00s and 63A9Ds there was a mild direct association which was statistically significant between desiring or not desiring residency training and career responses.[3] Comparison of the top six choices for the respondents with "no specialty interest" in Table 25 with the "Definitely No" Group choices in Table 27, shows that these groups are not only similar in number, n=39 and n=47, but that there is an 83% rate of agreement in topics selected. Also, across every level of experience, only the proportion of respondents who said they were "yes, definitely" making the Army a career was statistically different for the 63A00s and the 63A9Ds. Up to the six years of experience level,

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[3]Spearman's Rank Correlation Test ρ=.3899, $p < .0001$.

the proportion of 63A9Ds that planned to make the Army a career was greater than that of 63A00s.[4] This trend was reversed after the six year mark. The only other significant finding displayed in Table 28 is that for respondents that were interested in specialty training, the two 63As groups differed significantly in the proportion selecting the career option "Not sure but leaning towards staying in" (.20 versus .29, respectively, $p<.02$) and in the proportion selecting "not sure" (.127 versus .67 respectively, $p<.04$).

Proximity to Specialists

Access to dental specialty support, either within a 63As clinic or within a short traveling distance, is presented in Table 29. As might be expected, approximately 83% of both groups of 63As said their assigned clinics had specialty support. Compared to 63A00s, a significantly greater proportion of the 63A9Ds said their patients had to travel more than ten miles to see a specialist for a referral(.45 versus .36, respectively, $p<.05$). However, over 50% of both groups (64% for 63A00s and 55% for 63A9Ds) said their patients did not have to travel more than ten miles to see a specialist.

A comparison of specialty support and patient travel requirements for the two groups of 63As by area of assignment is presented in Table 30. The largest proportion of 63As assigned to CONUS clinics had clinical specialty support and their patients did

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[4]Two-tailed z-approximation test. For 0-3 yrs, $p< .04$; for 3-6 yrs, $p<.01$; for 6-10 yrs, $p<.02$; for 10-15 yrs; $p<.002$.

not have to travel for referrals (.23 for the 63A9Ds and .49 for the 63A00s). For those 63As located in OCONUS clinics, the largest proportion of each group (approximately .23 for both groups) had specialty support but their patients still had to travel ten or more miles for a referral to see some specialists.

Compared to CONUS clinics, a significantly greater proportion of the OCONUS clinics had no specialty support and patients had to travel more than ten miles to see a specialist (.20 versus .05, respectively, $p<.001$). This was particularly true for the 63A00s, as a significantly greater proportion of those assigned to OCONUS clinics had no support and their patients had to travel (.14 versus .04, $p<.001$). There were no significant differences in the proportions of 63A9Ds or 63A00s assigned to any of the combinations of specialty support and patient travel requirements portrayed in Table 30, and thus, no further distinction will be made between the two groups of 63As in this phase of the analysis.

Table 31 presents a comparison of the top six continuing education topics selected by all 63As based on the level of specialty support within their clinics and whether or not their patients had to travel greater than ten miles for referral to a specialist. Using clinics with specialty support and no patient travel requirements for referrals as the standard for comparison (Level I), Table 31 shows that there was a high level of agreement on subjects among the four possible clinical situations. Compared to the Level I standard, each of the other three levels had a 67% rate of agreement among selected topics. In general, there were

few significant differences in the proportion of respondents selecting the agreed upon topics. There were only two significant findings. The first was in the proportions of respondents of Level III (no-support, yes-travel) and Level I selecting the topic How to Handle Difficult People (Level I .18 versus Level III .32, $p < .03$). The second was in the difference between the .18 of Level I respondents selecting the topic Dental Implants and the .21 of the Level IV general dentists (No-support, No-travel) placing this topic among their top six choices ($p < .001$).

When the Level I clinics are omitted, a comparison of the other three levels shows that two topics, How to Handle Difficult People and Dental Implants, are common topics shared by the other three levels. The comparison of top choices of continuing education subjects based on level of specialty support and patient travel requirements can also be evaluated based on clinic location. Table 32 gives such a comparison for 63As assigned to CONUS or OCONUS clinics. Comparing the selections of 63As assigned to CONUS and OCONUS Level I clinics (yes-support, no-travel), Table 32 shows that there was a 50% rate of agreement, with Oral Surgery, Impactions, and Medical Emergencies being selected by each group.

For Level II clinics (yes-support, yes-travel), the CONUS and OCONUS general dentists agreed upon Esthetics/Bonding and How to Handle Medical Emergencies to be included among their top six topics (33% agreement rate). At the Level III clinics (no-support, yes-travel), again there was a 33% rate of agreement for the CONUS and OCONUS respondents, agreeing upon Esthetics/Bonding and How to

Handle Difficult People. Similarly, the Level IV clinics (no-support, no-travel) had a 33% agreement rate between the 63As from the two areas of assignment, with How to Handle Difficult People and Oral Surgery being the two topics agreed upon.

In addition to comparing choices of top six subjects within the various levels of specialty support, Table 32 also permits comparisons between the two extremes in levels of clinical specialty support, Level I and Level III. Comparing Level I CONUS clinics with responses from dentists assigned to Level III CONUS clinics, there were distinct differences in the topics selected with agreement on only the topics Esthetics/Bonding and How to Handle Difficult People (33% agreement rate). When comparing Level I and Level III OCONUS choices, these two opposing levels only had the topic Management of Orofacial Infections in common with each other for a 17% rate of agreement.

Responses Focusing on Categories of Topics

The next phase of analysis focused on the level of perceived need for each of the continuing education topics based on the scale of one (no need) to four(high need) for the four response groups. Initially, the 92 topics (see Table 2) from the questionnaires were grouped into 4 broad categories: clinical dentistry, medically related, clinic management, and alternate wartime training. Responses for each question were standardized and mean composite scores were calculated for each question within the 4 response groups. The mean composite scores for each question were ranked in each of the 4 categories and comparisons of the rank-ordered mean scores between the response groups were made.

It is possible that this method of analysis could have introduced some distortion into the data. The decision to transform the ordinal data collected for each of the 92 topics into interval data was made in order to facilitate describing the data. Perhaps the most serious problem associated with going from the ordinal to interval scale of measurement is the perception of the ordinal scale. The scale used in this study does not supply any information about the magnitude of the differences between the categories. The difference perceived by the respondent between No Need and Low Need may or may not be the same as the difference between Moderate and High Need; there is no way of telling. In the conversion to an interval scale, the assumption is made that these differences are not only the same but are also theoretically measurable (Blalock, 1972).

Table 33 displays the top 10 per cent of topics in each of the four categories for the commanders and clinic chiefs. Table 33 also gives the Spearman Rank-Order correlation coefficient (ρ) and its statistical significance for all topics within each category not just for the top 10 per cent displayed. Across all categories, there was a strong positive correlation for the rank-ordered mean scores of topics between the commanders and clinic chiefs, ranging from a correlation of .88 for the Clinical Dentistry category to a correlation of .94 for the Alternate Wartime Training category.

The rank-ordered mean scores of topics between the two groups of 63As are presented in Table 34. Again, only the top 10 per cent of topics within each category are displayed. As was seen with the commanders and clinic chiefs, when the topics were considered within the four categories, there was a strong positive correlation for the rank-ordered mean responses of topics between the 63A00s and the 63A9Ds. The Spearman's correlation coefficient ranged from a value of .94 for the Clinical Dentistry topics to a .98 for the Alternate Wartime Training topics.

Tables 35 through 38 present a comparison of the top 10 per cent of topics within each of the four categories for the two groups of 63As when years of dental experience are considered. Across all categories and for every level of years of dental practice, there was a strong positive correlation for the rank-ordered mean scores of topics between the 63A00s and the 63A9Ds ($\rho > .84$ at $p=.0003$ or smaller).

Finally, Table 39 presents a comparison of the top six topics,

ranked for each of the response groups based on the highest mean composite scores, and reflecting the level of need of the continuing education topics. Medical Emergencies emerged as the subject with the highest mean composite score for each of the response groups, while the Treatment of Orofacial Infections was the only other topic shared by all of the groups. Comparisons between response groups reveal levels of agreement similar to those presented in earlier tables which reflected the top six topics respondents felt were most needed. In Table 39 there is an 83% agreement rate between the commanders and the clinic chiefs as well as between the 63A00s and the clinic chiefs. The 63A00s and the commanders shared 67% of similar topics, while the 63A9Ds had an agreement rate of 33% with each of the other three response groups.

Discussion

The 1990 Dental Continuing Education Survey was initiated to describe the preferences and perceived needs for continuing education courses of non-specialty trained general dentists as well as to determine what supervisors felt the general dentist needed. It is important to recognize that these perceived needs are highly subjective and only serve to approximate the true needs of the general dentists, true needs which most probably lie somewhere between the perceptions of the 63As and those of the commanders/clinic chiefs.

While analysis of the data revealed many similarities in the preferences and perceived needs for continuing education courses

for the various response groups, significant differences, were also apparent. It must be noted however, that a general limitation of the cross-sectional data presented here is the inability to establish temporal relations. Thus, this type of survey merely provides a snapshot of the preferences and perceived needs at one point in time that may be quite different from those currently held. Despite this shortcoming, the data and their interpretation can provide useful guidance to the Dental Care Systems leadership in evaluating current education programs as well as direction for future programs.

Response Rates

Despite the length of the questionnaire, the response rates (Table 1) were high. After an initial mailing and a follow-up electronic mail message to commanders, information was obtained from 70.4% of the commanders/clinic chiefs and 77.5% of the 63As eligible for the study. Nonresponse can seriously compromise the generalizability of a study, especially if nonrespondents differ significantly from those who do respond. Given the relative homogeneity of the Army Dental Corps, the assumption was made that nonresponse to the questionnaire was more likely due to characteristics of the study design than to differences among those eligible for the study. Two characteristics of the study design could have influenced the response rates. First, questionnaires along with distribution instructions were mailed to DENTAC commanders between 7 June and 25 July 1990. This period is often

one of disruption due to permanent change of station moves and it is likely that some questionnaires were either misplaced or were never received. The second characteristic deals directly with the mailing system itself. Even though questionnaires were mailed via the U.S. Postal Service, anecdotal evidence suggests that mailing and distribution are more difficult in OCONUS locations. If one assumes that there was no measurable difference between CONUS and OCONUS DENTAC commander's willingness to participate in this survey, the significantly lower response rate from OCONUS commanders (60% versus 82%, $p < .04$) might be explained by the lack of comparability in the two mailing systems. These notable differences in the CONUS and OCONUS mailing systems may also partially explain the significantly lower response rate from the 63A9Ds compared with the 63A00s (68% versus 84%, $p< .0001$), as the data reveal that compared with the 63A00s, a significantly greater proportion of the 63A9Ds were assigned to OCONUS clinics (.42 versus .32, $p<.01$).

It may be that a higher response rate would have been achieved had another mailing time frame been chosen for the distribution of the questionnaires as well as the utilization of a more direct method of questionnaire distribution. Since response trends to mail surveys vary across populations and issues, response rates in future surveys could be enhanced with greater follow-up efforts (Siemiatycki, 1984). Therefore, the levels of nonresponse were not viewed as a threat to the generalizability of the results of the survey and no attempt was made to collect data on nonrespondents.

With today's organized dental community emphasizing, even demanding, continuing education for licensure renewal and professional development, it is not surprising that the proportion of survey respondents who felt there was a high need for continuing education was high, ranging from .84 for 63A00s to .95 for commanders. These same response groups also gave good or excellent ratings to the Dental Corps continuing education efforts.

Commanders/Clinic Chiefs

Although these data suggest broad agreement among all response groups concerning the perceived need for continuing education and the quality of the current Dental Corps continuing education programs, the analyses reveal many significant differences, as well as similarities, in the response groups' preferences and perceived needs for various courses. Nowhere in the results were the similarities in preferences and perceived needs for various continuing education courses more pronounced than between the commanders and clinic chiefs. Whether comparing their top six preferences for continuing education topics, as they appear in Table 8, or the rank-order of topics based on the four broad categories as presented in Table 33, the responses of these two groups were nearly identical. For the most part, responses to the survey questions, represent the collective experiences of the individual respondent. DENTAC commanders and clinic chiefs, to varying degrees, have shared career paths, including clinical and residency training experience as well as staff and command

positions. In other words, it appears that experience and level of responsibility influence continuing education topic selection. This is supported by the general lack of statistical differences in how these two response groups rated or responded to continuing education topics. It is also important to point out that, as was shown in Tables 8 and 33, the commanders/clinic chiefs consistently chose topics unrelated to restorative dentistry and more related to issues concerning risk management. This too appears to be a reflection of job position and level of responsibility.

General Dentists

The similarities and differences between the two 63A response groups were less obvious than with the commanders and clinic chiefs. This is probably attributable to greater diversity among these two general dentistry groups with regard to levels of clinical expertise, years of experience, and varying job demands. As was presented in Table 14, when viewed in the aggregate, the combined response of all 63As included over 83% of the top six choices from both the 63A00 and the 63A9D lists. However, this table also shows that if one were to only view perceived needs from the combined responses of all general dentists, the differences between the two groups of 63As would be masked by the aggregation.

Despite these similarities of choices, subtle but significant differences were detected in both the proportion of respondents choosing a certain topic as well as the proportion rating a topic as high need. These differences are further illuminated when one examines the type of subjects among the top six choices that were rated high need. Tables 12-14 reveal an interesting trend. Although both groups chose topics relating to clinical skills, the difference was a matter of degree. The 63A00s chose more basic clinical skills such as Diagnosis/treatment of Orofacial Infection, Oral Surgery for the General Practitioner and Management of Impactions/Complicated Extractions, while the trend for the 63A9Ds was towards more advanced clinical skills and interests, choosing Esthetics/Bonding, Glass Ionomers, and Dental Implants.

The most plausible explanation for these similarities and

differences lies in the fact that responses of the general dentists to this survey represent the collective experiences of dental school training, advanced training, years of clinical experience, current and previous assignments, and prior continuing education courses. This explanation is demonstrated quite well when one notes the significantly lower proportion of 63A9Ds that rated the Army's continuing education program as good or excellent. It is possible that the 63A9Ds, especially the junior officers, may have greater expectations of a continuing education program than 63A00s with similar backgrounds due to the 63A9Ds participation in a highly structured and academically challenging general practice residency.

The most striking but not totally unexpected observation to emerge from the aggregated responses concerning top six topic preferences was the overall lack of agreement between the two 63A groups and the commanders/clinic chiefs (Table 17). These findings suggest that level of responsibility and perspective may influence continuing education topic selection. Just as the 63As subject selections reflect their concerns with direct patient care and personal professional growth, the commanders/clinic chiefs selections demonstrate their broader concerns of issues affecting the entire clinic or DENTAC.

It should also be noted that the survey instrument did not distinguish between 63As, particularly 63A9Ds, who were also clinic chiefs and responded to the commander/clinic chief questionnaire instead of the 63A questionnaire. This is especially problematic

in that the inclusion of the 63As responses, especially if the number is large, in the commander/clinic chief responses would tend to weigh the continuing education preferences of the commanders/clinic chiefs in the direction of the 63As responses. However, given the overall lack of agreement between the two 63A groups and the commanders/clinic chiefs that already exists, it is believed that these differences would persist even if the survey instrument had been able to distinguish between 63As and 63A clinic chiefs.

Area of Assignment

When the analyses focused on selected characteristics, the similarities and differences between the two 63A response groups were more apparent than in the analysis of just the aggregated responses. The data revealed that when area of assignment was considered, there were no significant differences between the top six subject choices of the CONUS and OCONUS 63As (Table 19). A more detailed analysis also revealed that there were only minor differences in the selections of the CONUS 63A9Ds and 63A00s, and similar results were observed with the CONUS and the OCONUS 63A00s. However, compared to the other 63A response groups, significant and important distinctions between topics chosen were revealed for OCONUS 63A9Ds. The data showed that there was no agreement between this response group and their 63A00s colleagues assigned to OCONUS clinics, and that the OCONUS 63A9Ds selected significantly different continuing education topics than CONUS 63A9Ds (Table 20).

Given the similarities of the other 63A groups, what made the OCONUS 63A9D response group so different? The most plausible explanations as to how area of assignment independently influences this difference must consider other contributing variables in combination with area of assignment. To do otherwise would simply ignore the composition of characteristics that contribute to the uniqueness of the continuing education topics chosen.

Three factors, either collectively or in combination with area of assignment, might shed some light on the significant differences detected in the responses of the OCONUS 63A9Ds. As was mentioned previously, the response rates for OCONUS respondents in general and OCONUS 63A9Ds in particular were significantly lower than the other response groups. This lower response rate could have introduced a bias into the results which would serve to understate the total OCONUS response. However, as was mentioned *in* the discussion on response rates above, it is assumed that differences in response rates were most likely due to characteristics of the study design and not to differences between respondents and non-respondents. It is suggested that the responses of the OCONUS 63A9Ds adequately represent all of the OCONUS 63A9Ds eligible for the study.

Two other factors, in combination with an OCONUS area of assignment, might offer a more acceptable explanation for the differences noted for the 63A9Ds. As stated earlier, a significantly greater proportion of 63A9Ds served in OCONUS assignments compared to 63A00s (.43 versus .32, respectively,

p<.01). Also, a significantly greater proportion of the OCONUS 63A9Ds (.53 versus .32, $p < .004$) had less than three years of service and were assigned to clinics with minimal or no specialty support. This analysis suggests that a significant proportion of the OCONUS 63A9Ds were assigned to small or isolated clinics and thus the topics that this group selected may in fact reflect courses tailored to their particular needs. The fact that the topics selected by the OCONUS 63A9Ds had a greater proportion of management related issues than any of the other response groups would tend to support this conclusion. It would appear that an OCONUS assignment coupled with only a few years of practice and service in a small clinic offer the most credible explanation for the differences detailed in Table 20 concerning the OCONUS 63A9Ds. This explanation seems consistent with the Dental Corps' utilization policy and differentially assigning newly trained 63A9Ds to small clinics with minimal supervision and support.

With regard to area of assignment, one additional comment must be made. If true differences exist between CONUS and OCONUS perceptions of need, it is assumed that these perceptions develop over a period of time. Because these data do not provide information on respondent's actual time at their current assignment, further analyzes could not be conducted.

Years of Service

As might be expected, the data suggest and the previous discussion supports that years of dental practice influenced continuing education topics selected by the response groups. Both at the two years or fewer and the five years or fewer of service mark, the responses of the 63A9Ds were significantly different from those of the 63A00s, most probably explained by the 63A9Ds advanced training. Even within the 63A9D group, the responses of those with two or fewer years of service were noticeably different than those with five or fewer years. Beyond six years of experience, no significant differences were observed between the 63A00s and the 63A9Ds top six selections. This might suggest that any significant differences in clinical skills or levels of professional expertise that exist between the 63As at the start of their dental careers and influence their choices of topics, may be eliminated as each group goes beyond six years of service. In other words, skill levels and interests may even out over this time period.[5] However, given that the six year mark and beyond is frequently the time when most 63As are selected for residency training, it is entirely possible that at this point, differences that once existed between the 63A9Ds and 63A00s are eliminated not because of an "evening out" of clinical skills but because of the relative homogeneity of the remaining 63As.

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[5]This assumes that the two year and the six year cohorts in this study are comparable; that when the current six year group was at its two years of service mark, it was not significantly different than the current two year cohort in regard to selected clinical variables.

Residency Training

Initially, it had been hypothesized that 63As who expressed no interest in residency training, something deemed essential to a military dental career, would select continuing education topics different from those who were interested in a residency. It was believed that this group of 63As would chose topics that might better prepare them for a civilian practice. The results of the data analyses did not support this hypothesis. Although quite exhaustive in its coverage of topics, perhaps the detail of the questionnaire was not specific enough to distinguish between courses more suited for civilian practice than a military dental practice.[6] However, it is believed that for this study population, as Table 25 shows, there were no significant differences in topics selected by those with a residency preference and those without.

Of those expressing an interest in residency training, continuing education topics chosen appeared to express the residency interest of the respondent as well as a core of two or three topics common to all residency specific choices. This seems reasonable when one considers the interactive elements at work when the 63A chooses a military residency. Choice of residency training depends upon an individual's professional desires, training availability, level of perceived competitiveness for selection, potential assignments, military career aspirations, and numerous

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[6]For example, there were no questions relating to topics such as dental care financing or practice management.

other factors. A generalized study such as this does not provide the level of specificity one would need to analysis why one chooses a particular residency training. Thus the results presented here only generate hypotheses but cannot test them. Perhaps for this study population the influence of residency preference did not significantly affect the continuing education subjects chosen.

Career Plans

It should come as no surprise, when one considers that many constantly evolving factors impact upon career plans, that no clear patterns emerged when the variable relating to military career aspirations was analyzed. Table 27 supports this conclusion by presenting continuing education topics and levels of agreement as varied as the five possible career choices. Initially it was hypothesized that there would be a strong association between career aspirations and desire for residency training, two factors that intuitively go hand-in-hand. The data revealed that, although there was an association, the degree of the association was milder than had been expected. An explanation for this might be found in a third variable, years of service. It was assumed that as a 63A's time in service increases, the incentive to choose a military career and likewise residency training would increase. In an attempt to further explore the relationship of these variables, a more detailed analysis was conducted with logistic regression, in which choosing residency training was expressed as a function of years of practice, career aspirations, and the type of 63A (Hosmer,

1989). Details of these analyses are presented in Table 40. For this logistical model, when compared to respondents who said they were either leaning towards getting out or definitely getting out, the odds of choosing residency training for those who said they were definitely staying in or leaning towards staying in were 13.1 to 1. Although this logistic regression model would appear to support the initial premise that there was a strong association between career aspirations and residency training selection, interpretation of these results must be approached with caution. In this study population, only 8.2% of the respondents with fewer than 15 years of service stated that they did not desire advanced residency training, and thus this select study population almost always desired residency training which calls into question the utility of these logistical results. The variation in the responses for residency training that was explained by this logistical model was relatively small (Pseudo R-squared=.31)[7] suggesting, as one might expect, that other variables which were not collected in this study, may significantly contribute to the decision process of selecting or not selecting residency training. The one conclusion that can be safely made concerning this analyses is that it is extremely difficult to tease out all the variables that, in combination, help to explain selection choices.

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[7]Pseudo-R-squared is a summary measure of Goodness of Fit of the Logistic Regression Model which is analogous to the regression coefficient of determination, R-squared. Aldrich, J. and Nelson, F. Linear Probability, Logit and Probit Models. Sage Publications, Series: Quantitative Applications in the Social Sciences, 1984, pp.56-8.

Clinic Type

In an attempt to examine the influence clinic type might have on the continuing education topics selected, 63A respondents were categorized into four types of clinics based on the degree of specialty support found within their clinics and whether or not their patients had to travel greater than ten miles to seek specialty support when it was not available within the respondent's clinic. As was shown in Table 31, there were few significant differences in the topics selected by the respondents from the four clinic types and the differences noted were more a matter of degree. When clinic types were further broken down into CONUS and OCONUS locations(Table 32), there was still a high level of agreement within each of the categories and few significant differences. A comparison of clinics with specialty support and no patient travel and clinics with no specialty support and patient travel, revealed that these two extremes exhibited the most distinct differences in topics selected.

These two types of clinics offer the best support for the argument that clinic type does influence continuing education courses selected. It seems reasonable to assume that a 63A assigned to a clinic with specialty support and the opportunity to observe specialty procedures performed on a varying mix of patients might have different perceived continuing education needs than someone assigned to an isolated clinic without specialists and which treats only active duty soldiers. In other words, the topics selected may reflect what the 63A perceived they needed in the type

of clinic they were located in at the time of the survey. Since this survey did not solicit information on a respondent's clinic type and due to the anonymous nature of the questionnaire there was no way of adequately verifying clinic locations. Therefore, the results presented in Tables 30 through 32 should be viewed as merely descriptive in nature and the inferences that have been made as perceptions based on the available data.

Topic Categories

The discussion so far has dealt with the analyses of the factors perceived to have influenced survey participants selection of the six continuing education topics they felt were most needed. When the focus of the analyses shifted to an examination of the perceived need for each of the 92 topics grouped into four broad categories (Table 2), the results were similar to those presented so far. Comparisons of the rank-ordered mean scores within each of the broad categories as presented in Tables 33 and 34 support the findings discussed earlier, namely that the DENTAC commanders and clinic chiefs expressed similar perceived needs for each of the continuing education topics. For the 63As, their rank-ordered mean response scores for topics were also highly correlated across all four categories and also across all levels of years of practice. Given the questionnaire's heavy emphasis on clinical dentistry-related topics (58 of the 92 topics), it is remarkable that there was such a high level of agreement between the response groups concerning this category of topics (Tables 33 and 34).

When the top six topics, based on the highest mean composite scores, were ranked for each of the response groups (Table 39), a slightly different perspective of the data emerged. While the earlier analysis, as summarized in Table 17, showed little if any agreement between the topic selections of the commanders/clinic chiefs and the two 63A response groups, comparisons of the top six topics based on mean composite scores for perceived need were noticeably different. The high level of agreement seen between the commanders and the clinic chiefs paralleled that seen in the earlier analysis. Also, at this level of analysis, as was seen in the previous comparisons, there was little overall agreement between the 63A9Ds and the commanders/clinic chiefs. However, comparisons of top six topics based on mean composite scores between the 63A00s and the commanders/clinic chiefs revealed broad agreement for these groups. At this level of analysis, there was also a lower level of agreement of topics among the two 63A response groups.

Despite the many similarities observed between the six topics the survey participants ranked as the ones they felt were most needed and the top six topics based on mean composite scores, there were also noticeable differences. There are a number of potential explanations for these differences. Although the questionnaire was thorough in its coverage of continuing education topics, it was also lengthy. Thus it is possible that a respondent's perceived need for a particular course was difficult to retain until the end of the questionnaire when the respondent was asked to rank-order

their top six choices. This lack of agreement could also be an indication that the opinions expressed concerning the need for the individual topics were not strongly held by the respondent.

Another explanation for the differences is distortion that may have been introduced when the ordinal data was converted into an interval level of measurement, as discussed previously.

Conclusion

In general, DENTAC commanders, clinic chiefs, and general dentists are satisfied with the Dental Corps' continuing education programs and they view continuing education as important. The results also reveal important and significant differences in the perceived need for various continuing education topics expressed by these response groups. Factors such as level of responsibility, years of practice, participation in the one-year general practice residency, and area of assignment significantly influenced the perceived needs of non-specialty trained general dentists. Additional factors, that were unavailable in this study, could potentially influence these perceived needs for educational topics. Future research efforts should be directed towards identifying these factors.

To ensure that the special dental needs of the military community are met, and at the same time, to address the educational needs of the general dentists, continuing education program planners, at all levels of the Army's Dental Health Care team, must give consideration to the differences in perceived needs that exist

between the various groups cited in this report. In addition, these perceived needs should be reassessed on a regular basis.

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APPENDIX A

SURVEY QUESTIONNAIRES

Dental Continuing Education Preference Survey

Questionnaire for DENTAC Commanders and Clinic Chiefs

Case No._____(1-4)

1. The purpose of this survey is to evaluate current continuing education courses offered by the Army Dental Corps for 63As and 63A9Ds plus to evaluate perceived need for continuing dental education on additional topics.

2. Your input will be of assistance in determining whether the continuing dental education needs of 63As and 63A9Ds are being met as well as in providing guidance for the development of future continuing dental education courses.

3. Please complete the following questionnaire and return it to your project officer or project NCO. Completing the survey should take no more than 15 minutes.

Dental Continuing Education Preference Survey

Directions: Circle the number corresponding to the level of need for dental continuing education in the following topic areas by non-specialty trained general dentists (63As or 63A9Ds) in your command. Use the following scale:

1 = No need

2 = Low need

3 = Moderate need

4 = High need

Topic	Level of Need				
1) Management of Medical Emergencies	1	2	3	4	(5)
2) Diagnosis and Treatment of TMJ Problems	1	2	3	4	(6)
3) Cardiopulmonary Resuscitation	1	2	3	4	(7)
4) Occlusal Equilibration	1	2	3	4	(8)
5) Clinical Management of Discolored Teeth (vital and non-vital)	1	2	3	4	(9)
6) Management of Medically Compromised Patients	1	2	3	4	(10)
7) Craniofacial Pain	1	2	3	4	(11)
8) Preventive Health and Nutrition	1	2	3	4	(12)
9) Diagnosis and Treatment of Orofacial Infections	1	2	3	4	(13)
10) Salvaging Endodontic Failures	1	2	3	4	(14)
11) Perio-Endo Problems	1	2	3	4	(15)
12) Management of Actte Periodontal Conditions	1	2	3	4	(16)
13) Oral Surgery for the General Practitioner	1	2	3	4	(17)

14)	Diagnosis and Treatment of Endodontic Problems	1	2	3	4	(18)
15)	Posterior Composite Restorations	1	2	3	4	(19)
16)	Vital Pulp Therapy	1	2	3	4	(20)
17)	Basic Clinical Oral Pathology / Medicine	1	2	3	4	(21)
18)	Esthetics and Prosthodontics	1	2	3	4	(22)
19)	Minor Tooth Movement	1	2	3	4	(23)
20)	Root Canal Obturation and Types of Filling Materials	1	2	3	4	(24)
21)	Mucogingival Procedures	1	2	3	4	(25)
22)	Management of Handicapped Patients	1	2	3	4	(26)
23)	Occupational Hazards in the Dental Clinic	1	2	3	4	(27)
24)	Partial Denture Design	1	2	3	4	(28)
25)	Diagnosis and Treatment of Periodontal Disease	1	2	3	4	(29)
26)	Apicoectomy and Retrograde Filling	1	2	3	4	(30)
27)	Porcelain Bonded to Metal Restorations	1	2	3	4	(31)
28)	Pre-Prosthetic Surgery	1	2	3	4	(32)
29)	Periodontal Disease in Children	1	2	3	4	(33)
30)	Impression Materials and Techniques	1	2	3	4	(34)
31)	Periodontal Osseous Procedures	1	2	3	4	(35)
32)	Relationship Between Crown / Pontic Design and Tissue Health	1	2	3	4	(36)
33)	Dental Implants	1	2	3	4	(37)
34)	Biopsy Techniques	1	2	3	4	(38)
35)	Recognizing Child Abuse and Responsibilities of the Dentist	1	2	3	4	(39)
36)	Cavity Design and Instrumentation	1	2	3	4	(40)

37)	Genetic Anomalies of Clinical Interest	1	2	3	4	(41)
38)	Forensic Dentistry	1	2	3	4	(42)
39)	Sealants	1	2	3	4	(43)
40)	Fluoride	1	2	3	4	(44)
41)	Management of Cancer Patients-- Irradiation and Chemotherapy	1	2	3	4	(45)
42)	Management of Patients on Drug Therapy	1	2	3	4	(46)
43)	Principles of Occlusion	1	2	3	4	(47)
44)	Restoration of Endodontically Treated Teeth	1	2	3	4	(48)
45)	Temporary Restorations	1	2	3	4	(49)
46)	Post and Core Preparations/ Restorations	1	2	3	4	(50)
47)	Resin Bonded Fixed Partial Dentures (including the Maryland bridge)	1	2	3	4	(51)
48)	Treatment Planning for Removable Partial Dentures	1	2	3	4	(52)
49)	Treatment Planning for Fixed Partial Dentures	1	2	3	4	(53)
50)	Dental Materials	1	2	3	4	(54)
51)	Glass Ionomers	1	2	3	4	(55)
52)	Esthetic Dentistry and Bonding Techniques	1	2	3	4	(56)
53)	Restoration of Primary Dentition	1	2	3	4	(57)
54)	Space Maintenance in Children	1	2	3	4	(58)
55)	Interceptive Orthodontics	1	2	3	4	(59)
56)	Behavior Management in Children	1	2	3	4	(60)
57)	Local Anesthetics: Pharmacology and Use	1	2	3	4	(61)
58)	Management of Impactions and Complicated Extractions	1	2	3	4	(62)
59)	Antibiotics: Pharmacology and Use	1	2	3	4	(63)

60)	TMJ Arthroscopy	1	2	3	4	(64)
61)	Non-surgical Management of Cranioman--dibular Disorders (TMJ, etc.)	1	2	3	4	(65)
62)	Diagnosis and Treatment of ANUG	1	2	3	4	(66)
63)	Preventive Dentistry	1	2	3	4	(67)
64)	Diagnosis and Treatment of Cracked Teeth	1	2	3	4	(68)
65)	Diagnosis and Management of Dento-Alveolar Trauma	1	2	3	4	(69)
66)	Analgesics: Pharmacology and Use	1	2	3	4	(70)
67)	Hepatitis	1	2	3	4	(71)
68)	Management of HIV+ Patients	1	2	3	4	(72)
69)	Infection Control	1	2	3	4	(73)
70)	Interpretation of Dental Radiographs	1	2	3	4	(74)
71)	Review of Immunology	1	2	3	4	(75)
72)	Drug Interactions	1	2	3	4	(76)
73)	Diagnosis and Management of Common Oral Lesions	1	2	3	4	(77)
74)	Use and Interpretation of Medical Laboratory Tests	1	2	3	4	(78)
75)	Concepts of Medical Sorting (Triage)	1	2	3	4	(79)
76)	Burns	1	2	3	4	(80)
77)	Assisting in Major Surgery	1	2	3	4	(81)
78)	Techniques of Venipuncture, Blood Collection, and Parenteral Fluid Therapy	1	2	3	4	(82)
79)	Management of Maxillofacial Injuries	1	2	3	4	(83)
80)	Indications, Use, and Care of Tubes (thoracotamy, intratracheal, and nasogastric)	1	2	3	4	(84)
81)	Preparation of Sterile Supplies and	1	2	3	4	(85)

Sterile Technique in the Operating Room					
82) Major Aspects of Psychological Care	1	2	3	4	(86)
83) Suturing Techniques	1	2	3	4	(87)
84) Control of Bleeding and Prevention of Shock	1	2	3	4	(88)
85) Management of Soft Tissue Wounds	1	2	3	4	(89)
86) Management of Fractures, Sprains, and Dislocations	1	2	3	4	(90)
87) Decontamination and Medical Management of NBC Casualties	1	2	3	4	(91)
88) How to Handle Difficult People (Patients, Coworkers, Bosses, etc.)	1	2	3	4	(92)
89) How to Handle Job Related Stress	1	2	3	4	(93)
90) How to Motivate Coworkers	1	2	3	4	(94)
91) Principles of Management (Management Theory)	1	2	3	4	(95)
92) Management of Military Dental Clinics (Inspector General's task list review)	1	2	3	4	(96)

93) Please list any topics not listed above which you believe should be available for continuing dental education: (97)

_____

_____

_____

From the 92 topics for continuing dental education listed above, please rank order six you think 63As and 63A9Ds need most. Use the number of the question to indicate your topic choice. For instance, if you think 63As and 63A9Ds are most in need of continuing education on the topic "How to Handle Difficult People", you would enter 88 in the blank after first choice below. If your next choice was " Dental Implants", you would enter 33 in the blank after second choice below, and so on. Please enter only one topic for each choice.

RANK ORDER of top 6 topics of greatest need for continuing dental education for 63As and 63A9Ds:

94) First Choice: ___ ___ (98-99)

95) Second Choice: ___ ___ (100-101)

96) Third Choice: ___ ___ (102-103)

97) Fourth Choice: ___ ___ (104-105)

98) Fifth Choice: ___ ___ (106-107)

99) Sixth Choice: ___ ___ (108-109)

Please provide us the following information about yourself:

100) Which best describes your position? (Circle one)

1 DENTAC Commander (110)

2 Clinic Chief

101) Please indicate your agreement with the following statement: 63As and 63A9Ds need continuing dental education. (Circle one)

1 Strongly agree

2 Agree

3 No opinion

4 Disagree

5 Strongly Disagree

102) Overall, how would you rate the current continuing dental education courses offered by the Army Dental Corps for 63As and 63A9Ds? (circle one)

1 Excellent 112)

2 Good

3 Fair

4 Poor

5 No opinion

Dental Continuing Education Need Survey

Questionnaire for 63As or 63A9Ds

Case No _____(1-4)

Dental Continuing Education Need Survey

Directions: Circle the number corresponding to your level of need for the specified topics for dental continuing education using the following scale:

1 = No need

2 = Low need

3 = Moderate need

4 = High need

Please provide us the following information about yourself:

100) What is your age?

___ ___ (110-111)

101) Are you (circle one):

1 Male

2 Female (112)

102) In what year did you graduate from dental school?

19___ ___ (113-114)

103) How many years have you been practicing dentistry?

___ ___ (115-116)

104) Did you complete a one year Army general practice residency?

1 Yes

2 No (117)

105) Do you hold a state license to practice dentistry?

1 Yes

2 No (118)

106) If you hold a state dental license, which state? (Give the 2 letter state abbreviation used by the post office. For example, Washington state would be WA, Washington, DC would be DC, and so on. If you hold a license in more than one state, please list the state which has the more stringent continuing dental education requirements.)

___ ___ (119-120)

107) How many hours of continuing dental education is required per year for you to maintain your state dental license? (If you hold a license in more than one state, please refer only to the one state which has the more stringent continuing dental education requirement.)

___ ___hours (121-122)

108) How many professional articles did you read in the past year? (circle one)

1 = None

2 = 1-5

3 = 6-10

4 = 11 or more (123)

109) Do you maintain a self-directed personal continuing education program?

1 = No

2 = Yes,from time to time

3 = Yes, regularly (124)

110) Please indicate your agreement with the following statement: I need continuing dental education. (Circle one)

1 = strongly agree

2 = Agree

3 = No opinion

4 = Disagree

5 = Strongly Disagree (125)

111) Overall, how would you rate the current continuing dental education courses offered by the Army Dental Corps? (circle one)

1 = Does not apply. I have never participated in a continuing education course sponsored by the Army.

2 = Excellent

3 = Good

4 = Fair

5 = Poor

6 = No opinion (126)

112) Does your assigned clinic have specialty support? (Circle one)

1 = Yes

2 = No (127)

113) Does your assigned clinic require patients referred for specialty care to travel 10 or more miles? (Circle one)

1 = Yes

2 = No (128)

114) Do you plan to make the Army a career? (Circle one)

1= Definitely

2 = I am not sure but am leaning towards staying in

3 = I am not sure but am leaning towards getting out

4 = I am not sure

5 = No, definitely (129)

115) In what area do you plan to seek specialty training? (Circle one)

1= 1 = Does not apply. I have no interest in specialty training.

2 = I have not decided.

3 = Comprehensive (General) dentistry

4 = Oral and Maxillofacial Surgery

5 = Oral Pathology

6 = Prosthodontics

7 = Endodontics

8 = Public Health

9 = Orthodontics

10 = Periodontics

11 = Pediatric Dentistry (130)

Please return completed questionnaires to your project officer or project NCO. Thank you for your assistance.

APPENDIX B

LETTER OF INSTRUCTION

DEPARTMENT OF THE ARMY
U.S. ARMY HEALTH CARE STUDIES AND CLINICAL INVESTIGATION ACTIVITY
FORT SAM HOUSTON, TEXAS 78234-6060

HSHN-D

7 June 1990

MEMORANDUM FOR DENTAC Project Officer/NCO

Subject: Letter of Instruction for Administering the Continuing Dental Education Needs Survey

1. PURPOSE of SURVEY

The enclosed questionnaires are part of a study on the continuing dental education needs of non-specialty trained general dentists (63As and 63A9Ds). The purpose of this study is to help the Dental Education Office evaluate its current courses in continuing education for non-specialty trained dentists and to evaluate the need for new courses. MG Lefler gave a tasking to the Dental Studies Division, US Army Health Care Studies and Clinical Investigation Activity to conduct the study.

2. DUTIES of PROJECT OFFICER/NCO

As the delegated agent of your DENTAC/Detachment commander, it is your responsibility to:

1) distribute questionnaires to appropriate personnel,
2) collect questionnaires after they are completed, and
3) return them in one mailing NO LATER THAN 15 July to

US Army HCSCIA
Attn: HSHN-D/MAJ Chisick
Building 2268
Ft. Sam Houston, TX 78234-6060

3. HOW to ADMINISTER the SURVEY

The study is designed to collect data from 2 different groups. Questionnaires have been color-coded for each group as follows:

BLUE- for non-specialty trained general dentists (63As or 63A9Ds)

GREEN- for DENTAC/Detachment commanders and clinic chiefs

You have been sent questionnaires for each group based on assignment information provided to us by the Career Activities Office. We have enclosed a few extra questionnaires just in case

these assignment figures are out of date.

If we have not sent you enough questionnaires, please tell us how many and which type you need.

We suggest you administer the survey to each group as follows:

1) Non-specialty trained dentists (63As and 63A9Ds) (blue questionnaire)

This questionnaire should be given to general dentists who have not had specialty training. The questions are all opinion or personal background. It should take at most 20 minutes to complete. We suggest you administer it to your general dentists as a group during unit training. Pass out the questionnaires, allow 20 minutes to complete them, then collect completed questionnaires. This will avoid having questionnaires lost or not filled out and will allow you to answer any questions they may have about the survey.

2) DENTAC/Detachment Commanders and Clinic Chiefs (green questionnaire)

This questionnaire should be given to commanders and clinic chiefs to complete at their convenience. Advise them of your suspense date for returning completed questionnaires. The questions are all opinion or personal background. It should take at most 20 minutes to complete.

If you have any questions about the survey, please contact the principal investigator, MAJ Michael C. Chisick or his research associate, SFC T. R. Williams at

AVN. 471-6028
7027
or 3331.

APPENDIX C

LETTERS OF ENDORSEMENT

DEPARTMENT OF THE ARMY
CHIEF, DENTAL CORPS
5109 LEESBURG PIKE
FALLS CHURCH, VA 22041-3258

REPLY TO
ATTENTION OF
DASG-DC

MEMORANDUM FOR

DENTAL ACTIVITY COMMANDERS
SURVEY PARTICIPANTS

SUBJECT: Continuing Dental Education Needs of 63As and 63A9Ds

1. I have asked the Dental Studies Division of the U.S. Army Health Care Studies and Clinical Investigation Activity (HCSCIA) to survey the continuing dental education needs of our non-specialty trained general dentists (63As and 63A9Ds). The purpose of this study is to help the Dental Education Office evaluate our current offerings in continuing education as well as to evaluate the perceived needs for new courses.

2. Continuing dental education is a vital contributor to professional development. I believe it also should be relevant, interesting, skill or knowledge enhancing, and cover topics in which a young dental officer <u>needs</u> development. Please see that these surveys are properly distributed to the appropriate personnel, completely filled out, and promptly returned to HCSCIA.

3. Through this survey, you have a unique opportunity to voice your opinion on an issue of great importance to junior dental officers. I value your input. It will help shape decisions that will ultimately make the Army's continuing dental education programs more responsive to the needs of young dentists.

Bill B. Lefler

BILL B. LEFLER
Major General, Dental Corps
Assistant Surgeon General
Chief, Army Dental Corps

DEPARTMENT OF THE ARMY
HEADQUARTERS, 7th MEDICAL COMMAND
APO NEW YORK 09102-3304

REPLY TO
ATTENTION OF

AEMDC (40) 18 May 1990

MEMORANDUM FOR DENTAC Commanders

SUBJECT: Packet of Continuing Dental Education Surveys

1. Soon you will receive a packet of surveys from the Dental Studies Division of the U.S. Army Health Care Studies and Clinical Investigation Activity. The packet will contain surveys for DENTAC Commanders, Clinic Chiefs, and non-specialty trained general dentists (63As and 63A9Ds). Please ensure that the surveys are properly distributed, completely filled out, and returned in one mailing by 1 July 1990. Instructions will be sent with the surveys.

2. The surveys are part of a study of the continuing dental education needs of non-specialty trained general dentists. Dental Studies is conducting this survey at MG Lefler's request and I fully support this study. The study results will impact on future continuing dental education programs for our non-specialty trained general dentists.

3. Point of contact for this project is MAJ(P) Chisick, AV 471-6028/7027.

Thomas R. Tempel

THOMAS R. TEMPEL
BG, DC
Deputy Commander

This is an important survey!

TABLES

Table 1

Response Rate

	Respondents	Assigned	Response Rate
Commanders*	55	74	.743
Clinic Chiefs	200	288	.694
General Dentists**	518	668	.775
63A00	332	396	.838
63A9D	186	272	.684

* 15 commanders/clinic chiefs returned questionnaires without stating duty assignment.

** 6 of the General Dentists returned questionnaires without stating 63A9D/63A00 status.

Table 2

General Categories and Grouped Subjects

Clinical Dentistry

Dx/Tx TMJ Problems	Equilibration	Discolored Teeth
Facial Pain	Health/Nutrition	Orofacial Infect.
Endo. Failures	Perio-Endo. Prob.	Perio. Prob.
Oral Surg.	Dx/Tx Endo. Prob.	Post. Composites
Vital Pulp Tx	Oral Path./Med.	Esthetics/Prosth.
Minor Tooth Move.	RC Obturation	Mucoging. Proced.
RPD Design	Dx/Tx Perio.	Apico/Retro Fill
PFM Restorations	Pre-Prosth. Surg.	Perio. in Child.
Impression Mat./Tech.	Perio. Osseous Proced.	Crown Design
Implants	Biopsy Tech.	Cavity Design
Sealants	Dx/Tx Oral Lesions	Occlusion Princ.
Restoration Endo.Teeth	Temp. Restorations	Post/Core Prep.
Resin Bonded FPD	Tx Plan RPD	Dental Materials
Glass Ionomers	Esthetics/Bonding	Tx Primary Teeth
Space Mainten. Child	Intercept. Ortho.	Child Behav.Mgmt.
Local Anesthetics	Impactions/Extractions	Antibiotics
TMJ Arthroscopy	Non-Surg. Mgmt TMJ	Dx/Tx ANUG
Prev. Dentistry	Dx/Tx Cracked Teeth	Analgesics
Dento/Alveolar Trauma	Interpret. Radiographs	Fluoride

Medically Related

Medical Emergencies	Med. Compromised Pts.	CPR
Handicapped Pts.	Spotting Child Abuse	Genetic Anomalies
Mgmt. Cancer Pts.	Pts. on Drug Therapy	Hepatitis
Mgmt. HIV+ Pts.	Immunology	Drug Interactions
Medical Lab Tests		

Clinic Management

Occupational Hazards	Infection Control	Job Stress
Mgmt. Difficult People	Motivating Co-workers	Management Theory
Clinic Management		

Alternate Wartime Training

Forensic Dentistry	Medical Triage	Burns
Assisting in Surgery	IV Therapy/Techniques	Use of Med. Tubes
Maxillofacial Injuries	OR Sterile Techniques	Psycological Care
Suturing Techniques	Mgmt. Bleeding/Shock	Soft Tiss. Wounds
Fractures/Sprains	Mgmt. NBC Casualties	

Table 3

Response Rates of Commanders and Clinic Chiefs Based on Area of Assignment

	COMMANDERS n=55		CLINIC CHIEFS n=200	
	CONUS	**OCONUS**	**CONUS**	**OCONUS**
-# of Respondents*	40	15	121	76
-# of Assigned	49	25	183	105
-% Responding	81.6	60.0	66.1	72.3

* A total of 3 clinic chiefs returned questionnaires without identifying their area of assignment.

Table 4
Characteristics of the General Dentists

Variable	63A9Ds (n=186) n	Mean	s.d.	%	63A00s (n=332) n	Mean	s.d.	%
Area of Assignment								
-CONUS	107			57.5	216			67.9
-OCONUS	79			42.5	102			32.1
Age(in years)	186	32.3	3.90		329	34.3	4.99	
Years in Practice	185	5.1	3.20		330	7.1	4.66	
Gender								
-Male	170			91.4	297			90.0
-Female	16			8.6	33			10.0
State License	182			97.9	325			98.2
Self-Directed Cont. Ed. Program	150			80.6	268			81.2
Residency Preference								
-no interest	10			5.4	29			8.9
-undecided	19			10.3	42			12.8
-Comprehensive Dentistry	51			27.7	114			34.9
-Oral Surgery	17			9.2	19			5.8
-Oral Path.	2			1.1	5			1.5
-Prosthodontics	16			8.7	28			8.6
-Endodontic	14			7.6	24			7.3
-Public Health	1			0.5	1			0.3
-Orthodontic	25			13.6	35			10.7
-Periodontic	19			10.3	21			6.4
-Pediatric	10			5.4	9			2.8

Table 5

Commander's Top 6
n=55

Question	Subject	N	Top Six (%)	Rated High Need (%)
Q1	Medical Emergencies	20	36.4	60.0
Q69	Infection Control	9	16.4	60.0
Q14	Diagnosis/Treatment of Endodontic Problems	9	16.4	40.0
Q13	Oral Surgery for the General Practitioner	7	12.7	49.1
Q2	Diagnosis/Treatment TMJ Problems	7	12.7	16.0
Q9	Diagnosis/Treatment Orofacial Infections	7	12.7	52.7

Table 6

Clinic Chiefs Top 6
n=200

Question	Subject	N	Top Six (%)	Rated High Need (%)
Q1	Medical Emergencies	58	29.0	53.0
Q13	Oral Surgery for the General Practitioner	57	28.5	53.3
Q6	Medically Compromised Patients	41	20.5	38.5
Q9	Diagnosis/Treatment Orofacial Infections	38	19.0	47.5
Q2	Diagnosis/Treatment TMJ Problems	29	14.5	30.7
Q14	Diagnosis/Treatment Endodontic Problems	28	14.0	9.5

Table 7

Commanders/Clinic Chiefs Combined Top Six Topics
n=255

Question	Subject	N	Top Six (%)	Rated High Need (%)
Q1	Medical Emergencies	76	29.8	54.1
Q13	Oral Surgery for the General Practitioner	72	28.2	51.3
Q9	Diagnosis/Treatment Orofacial Infections	53	20.8	48.1
Q6	Medically Compromised Patients	40	15.7	39.3
Q14	Diagnosis/Treatment Endodontic Problems	29	11.4	34.5
Q2	Dx/Tx TMJ Prob.	22	8.6	28.4

Table 8

Commanders and Clinic Chiefs
A Comparison of Top Six Topics
n=255

Commanders n=55	**Clinic Chiefs** n=200	**Combined** n=255
Med. Emerg.	**Med. Emerg.**	**Med. Emerg.**
Infect. Control	**Oral Surg.**	**Oral Surg.**
Endo. Prob.	Med. Compromised	**O/F Infect.**
Oral Surg.	**O/F Infect.**	Med. Compromised
Dx/Tx TMJ Prob.	**Dx/Tx TMJ Prob.**	**Endo. Prob.**
O/F Infect.	**Endo. Prob.**	**Dx/Tx TMJ Prob.**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 9

Commanders and Clinic Chiefs Combined
A Comparison of Bottom Ranked Six Topics
n=255

Clinic Chiefs n=200	**Commanders** n=55	**Total** n=255
TMJ Arthroscopy	TMJ Arthroscopy	TMJ Arthroscopy
Genetic Anomal.	Genetic Anomal.	Genetic Anomal.
Child Perio.	Child Perio.	Child Perio.
Psychol. Care	Prevent. Health	Psychol.Care
Osseous Proced.	Dental Implants	Osseous Proced.
Burns	Psychol.Care	Prevent. Health

Table 10

Commanders and Clinic Chiefs Combined
Rating of the Continuing Education Program for 63As

	Clinic Chiefs n=199		Commanders n=54		Total n=253	
Rating	**N**	**%**	**N**	**%**	**N**	**%**
Excellent	60	30.2	43	78.2	103	40.7
Good	116	58.3	11	20.0	127	50.2
Fair	18	9.0	0	0.0	18	7.1
Poor	2	1.0	0	0.0	2	0.8
No opinion	3	1.5	0	0.0	3	1.2

Table 11

General Dentist's Top Six
n=508

Question	Subject	N	Top Six (%)	Rated High Need (%)
Q13	Oral Surgery for the General Practitioner	111	21.9	41.3
Q88	How to Handle Difficult People	84	16.5	35.4
Q33	Dental Implants	75	14.8	34.6
Q52	Esthetics/Bonding	75	14.8	37.5
Q58	Management of Impactions Complicated Extractions	71	14.0	41.1
Q1	Medical Emergencies	57	11.2	44.3

Table 12

63A00s Top Six
n=324

Question	Subject	N	Top Six (%)	Rated High Need (%)
Q13	Oral Surgery for the General Practitioner	82	25.3	44.9
Q88	How to Handle Difficult People	54	16.7	35.4
Q9	Diagnosis/Treatment Orofacial Infections	53	14.4	45.8
Q58	Management of Impactions Complicated Extractions	42	13.0	44.9
Q52	Esthetics/Bonding	40	12.3	33.5
Q33	Dental Implants	38	11.7	31.6

Table 13

63A9Ds Top Six
n=184

Question	Subject	N	Top Six	Rated High Need
Q52	Esthetics/Bonding	41	22.3	44.6
Q1	Medical Emergencies	32	17.4	38.7
Q33	Dental Implants	31	16.8	39.2
Q88	How to Handle Difficult People	29	15.8	38.7
Q58	Management of Impactions Complicated Extractions	25	13.6	33.9
Q51	Glass Ionomers	22	12.0	43.5

Table 14

63A00s and 63A9Ds
A Comparison of Top Six Topics
n=508

63A00s n=324	**63A9Ds** n=184	**Combined** n=508
Oral Surg.	**Esthetics/Bonding**	Oral Surg.
Diff. People	Med. Emerg.	**Diff. People**
O/F Infect.	**Implants**	**Implants**
Impactions	**Diff. People**	**Esthetics/Bonding**
Esthetics/Bonding	**Impactions**	**Impactions**
Implants	Ionomers	Med. Emerg.

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 15

63A00s and 63A9Ds
A Comparison of Bottom Ranked Six Topics
n=508

63A00s n=324	**63A9Ds** n=184	**Combined** n=508
Fluoride	**Sealants**	Sealants
TMJ Arthroscopy	**TMJ Arthroscopy**	TMJ Arthroscopy
Sealants	**Health/Nutrition**	Fluoride
Cavity Design	**Cavity Design**	Cavity Design
Health/Nutrition	**Fluoride**	Health/Nutrition
Psychol. Care	NBC Casualties	Psychol. Care

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 16

63A00s and 63A9Ds Combined
Rating of the Continuing Education Program for 63As

	63A00s		63A9Ds		Total	
	n=328		n=183		n=511	
Rating	**N**	**%**	**N**	**%**	**N**	**%**
Excellent	116	35.4	49	26.8	165	32.3
Good	158	48.2	85	46.4	243	47.6
Fair	42	12.8	40	21.9	82	16.0
Poor	8	2.4	6	3.3	14	2.7
No opinion	4	1.2	3	1.6	7	1.4

Table 17

Top Six Topics
A Comparison Among Groups

63A00s	63A9Ds	CDRs/OICs
Oral Surg.	Esthetics/Bonding	Med. Emerg.
Diff. People	Med. Emerg.	Oral Surg.
O/F Infect.	Implants	O/F Infect.
Impactions	Diff. People	Med. Comp.
Esthetics/Bonding	Impactions	Endo. Prob.
Implants	Ionomers	Dx/Tx TMJ Prob.

Table 18

A Comparison Among Groups
Bottom Ranked Six Topics

63A00s n=324	**63A9Ds** n=184	**CMRs/OICs** n=255
Fluoride	Sealants	**TMJ Arthroscopy**
TMJ Arthroscopy	**TMJ Arthroscopy**	Genetic Anomal.
Sealants	**Health/Nutrition**	Child Perio.
Cavity Design	Cavity Design	Psychol. Care
Health/Nutrition	Fluoride	Osseous Proced.
Psychol. Care	NBC Casualties	**Health/Nutrition**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 19

All 63As
A Comparison of Top Six Topics
By Area of Assignment

CONUS n=323	OCONUS n=181
Esthetics/Bonding	**Oral Surg.**
Diff. People	Impactions
Oral Surg.	**Implants**
Med. Emerg.	**Esthetics/Bonding**
Implants	**Diff. People**
Med. Comp.	**Med. Emerg.**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 20

A Comparison of Top Six Topics
By Area of Assignment
For 63A9Ds and 63A00s

CONUS	
63A9Ds n=107	63A00s n=216
Med. Emerg.	**Oral Surg.**
Esthetics/Bonding	Diff. People
Implants	**Esthetics/Bonding**
Mgmt. Principles	O/F Infect.
Med. Comp.	**Med. Emerg.**
Oral Surg.	**Implants**

OCONUS	
63A9Ds n=79	63A00s n=102
Esthetics/Bonding	Oral Surg.
Intercept. Ortho.	Impactions
Diff. People	Implants
Motivate Co-workers	O/F Infect.
Mgmt. Principles	Antibiotics
Infect. Control	Med. Emerg.

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 21

63As With 2 or Fewer Years of Practice
Comparison With Consolidated 63A Groups
Top 6

63A00s Consolidated n=324	63A9Ds Consolidated n=184
Oral Surg.	**Esthetics/Bonding**
Diff. People	Med. Emerg.
O/F Infect.	**Implants**
Impactions	**Diff. People**
Esthetics/Bonding	**Impactions**
Implants	Ionomers

63A00s 2 Years or Fewer n=59	63A9Ds 2 Years or Fewer n=38
Oral Surg.	Med. Emerg.
Impactions	**Implants**
O/F Infect.	Ionomers
Implants	Infection Control
Endo. Prob.	Clinic Mgmt.
Maxillofacial Injuries	Mgmt. Principles

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 22

63As With 5 or Fewer Years of Practice
Comparison With Consolidated 63A Groups
Top 6

63A00s Consolidated n=324	63A9Ds Consolidated n=184
Oral Surg.	**Esthetics/Bonding**
Diff. People	Med. Emerg.
O/F Infect.	**Implants**
Impactions	**Diff. People**
Esthetics/Bonding	**Impactions**
Implants	Ionomers

63A00s 5 Years or Fewer n=135	63A9Ds 5 Years or Fewer n=109
Oral Surg.	Esthetics/Bonding
Impactions	**Implants**
Implants	Oral Pathology
O/F Infect.	Interceptive Ortho.
Maxillofacial Injuries	Esthetics/Prosth.
Med. Comp.	Med. Emerg.

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 23

63As With 6 to 10 Years of Practice
Comparison With Consolidated 63A Groups
Top 6

63A00s Consolidated n=324	63A9Ds Consolidated n=184
Oral Surg.	**Esthetics/Bonding**
Diff. People	Med. Emerg.
O/F Infect.	**Implants**
Impactions	**Diff. People**
Esthetics/Bonding	**Impactions**
Implants	Ionomers

63A00s 6-10 Years n=116	63A9Ds 6-10 Years n=60
Oral Surg.	**Med. Emerg.**
Diff. People	**Diff. People**
Med. Emerg.	Implants
Esthetics/Bonding	**Oral Surg.**
Impactions	**Job Stress**
Job Stress	**Esthetics/Bonding**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 24

63As With More than 10 Years of Practice
Comparison With Consolidated 63A Groups
Top 6

63A00s Consolidated n=324	63A9Ds Consolidated n=184
Oral Surg.	**Esthetics/Bonding**
Diff. People	Med. Emerg.
O/F Infect.	**Implants**
Impactions	**Diff. People**
Esthetics/Bonding	**Impactions**
Implants	Ionomers

63A00s 10 or more Years n=72	63A9Ds 10 or more Years n=14
Diff. People	**Diff. People**
Clinic Mgmt.	Implants
Oral Surg.	**Clinic Mgmt.**
Med. Comp.	**Esthetics/Bonding**
Med. Emerg.	Dental Materials
Esthetics/Bonding	**Med. Comp.**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 25

All 63As
A Comparison of Top Six Topics
By Interest in Residency Training

No Specialty Interest n=39	Specialty Interest n=511
Esthetics/Bonding	Oral Surg.
Job Stress	Impactions
Diff. People	**Diff. People**
Antibiotics	**Implants**
Med. Emerg.	**Med. Emerg.**
Implants	**Esthetics/Bonding**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 26

A Comparison of Top Six Topics By Residency Preference

General Dentistry n=165	Oral Surgery n=35	Prosthetics n=44
Oral Surg.	**Implants**	**Diff. People**
Med. Emerg.	**Med. Emerg.**	**Med. Emerg.**
Esthetics/Bonding	Max./facial Injury	**Implants**
Diff. People	Forensics	Esthetics/Pros.
Implants	Clinic Mgmt.	**Esthetics/Bonding**
Impactions	Craniomand. pain	RPD Tx Planning

Endodontics n=38	Orthodontics n=60	Periodontics n=40
O/F Infect.	Intercept. Ortho.	**Implants**
Impactions	**Esthetics/Bonding**	**Oral Surg.**
Apicoectomy	Craniomand. pain	Dx/Tx Perio.
Oral Surg.	Minor Tooth Move.	Intercept. Ortho.
Med. Emerg.	Motivate Co-workers	**Diff. People**
Job Stress	Mgmt. Principles	Med. Comp.

Pediatric Dentistry n=19
Intercept. Ortho.
Dx/Tx Oral Lesions
Medical Lab Tests
Ionomers
Oral Surg.
Impactions

*** Bold highlights indicate agreement with consolidated 63A Topics appearing in Table 11.**

Table 27

A Comparison of Top Six Topics By Army Career Plans

Do you plan to make the Army a Career?

Definitely Yes n=234	Unsure,Probably Yes n=117	Unsure, Probably No n=54
Oral Surg.	Esthetics/Bonding	Implants
Diff. People	Impactions	Intercept. Ortho.
Med. Emerg.	**Oral Surg.**	Infection Control
Impactions	O/F Infect.	O/F Infect.
Clinic Mgmt.	Intercept. Ortho.	**Med. Emerg.**
Antibiotics	Med. Comp.	Motivate Co-workers

Unsure n=52	Definitely No n=47
Oral Surg.	Esthetics/Bonding
Implants	**Diff. People**
Minor Tooth Move.	Implants
Diff. People	**Med. Emerg.**
Discolored Teeth	Antibiotics
Job Stress	Ionomers

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 28

Frequencies of Residency Plans and Years of Practice For 63A00s and 63A9Ds by Career Choice

Career	1	2	3	4	5
63A00s (n=308)					
Training*					
-No Training	2	1	1	0	22
-Training	143	61	29	39	10
Years of Practice					
- 0 to 3 years	14	24	15	14	14
- 3 to 6 years	28	19	6	11	8
- 6 to 10 years	60	16	8	10	6
-10 to 15 years	43	3	1	4	4
63A9Ds (n=180)					
Training					
-No Training	0	0	2	0	7
-Training	77	53	21	12	8
Years of Practice					
- 0 to 3 years	18	18	15	9	7
- 3 to 6 years	31	23	4	1	6
- 6 to 10 years	19	10	4	1	1
-10 to 15 years	9	2	0	1	1

Career Key
1= Yes, definitely plan to make the Army a career
2= Not sure but leaning towards staying in
3= Not sure but leaning towards getting out
4= Not sure
5= No, definitely not

* "No training" indicates respondent had no interest in residency training. "Training" includes all respondents who selected a specialty training and those who were undecided.

Table 29

A Comparison of Specialty Support And Patient Travel Requirements For 63A00s and 63A9Ds

Questions

Does your assigned clinic have specialty support?

Does your assigned clinic require patients referred for specialty care to travel 10 or more miles?

	Specialty Support(%)		Patient Travel(%)	
	Yes	No	Yes	No
63A9Ds (n=185)	83.8	16.2	44.9	55.1
63A00s (n=326)	83.1	16.9	36.2	63.8

Table 30

A Comparison of Specialty Support And Patient Travel Requirements by Area of Assignment

	CONUS(%) (n=323)		OCONUS(%) (n=181)	
	63A9D n=107	63A00 n=216	63A9D n=79	63A00 n=102
LEVEL I -Support(Yes) -Travel(No)	22.6	48.9	11.0	17.1
LEVEL II -Support(Yes) -Travel(Yes)	6.8	10.2	23.8	23.2
LEVEL III -Support(No) -Travel(Yes)	1.5	3.7	6.6	13.8
LEVEL IV -Support(No) -Travel(No)	2.2	4.0	2.2	2.2

Table 31

A Comparison of Top Six Topics By Level of Specialty Support And Patient Travel Requirements

LEVEL I Support(Yes) Travel(No) (n=282)	LEVEL II Support(Yes) Travel(Yes) (n=142)
Impactions	**Esthetics/Bonding**
Med. Emerg.	Oral Surg.
Esthetics/Bonding	**Implants**
Diff. People	**Med. Emerg.**
Implants	**Diff. People**
O/F Infect.	Job Stress

LEVEL III Support(No) Travel(Yes) (n=54)	LEVEL IV Support(No) Travel(No) (n=28)
Diff. People	Oral Surg.
Clinic Mgmt.	**Diff. People**
Implants	**Impactions**
Intercept. Ortho.	Med. Comp.
Esthetics/Bonding	**Med. Emerg.**
O/F Infect.	**Implants**

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 32

A Comparison of Top Six Topics By Level of Specialty Support And Patient Travel Requirements By Area of Assignment

LEVEL I Support(Yes) Travel(No)	
CONUS (n=231)	OCONUS (n=51)
Impactions	**Oral Surg.**
Oral Surg.	**Impactions**
Esthetics/Bonding	Dx/Tx TMJ
Med. Emerg.	O/F Infect.
Implants	**Med. Emerg.**
Diff. People	Ionomers

LEVEL II Support(Yes) Travel(Yes)	
CONUS (n=55)	OCONUS (n=87)
Esthetics/Bonding	Oral Surg.
Diff. People	Implants
Med. Emerg.	**Esthetics/Bonding**
Oral Path.	**Med. Emerg.**
Mgmt. Principles	Job Stress
Med. Comp.	Impactions

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 32(cont.)

A Comparison of Top Six Topics By Level of Specialty Support And Patient Travel Requirements By Area of Assignment

LEVEL III Support(No) Travel(Yes)	
CONUS (n=17)	OCONUS (n=37)
Clinic Mgmt.	**Diff. People**
Diff. People	Implants
Job Stress	Minor Tooth Move.
Cranio-mand. pain	Intercept. Ortho.
I.V. Techniques	O/F Infect.
Esthetics/Bonding	**Esthetics/Bonding**

LEVEL IV Support(No) Travel(No)	
CONUS (n=20)	OCONUS (n=8)
Med. Comp.	**Oral Surg.**
Med. Emerg.	Motivate Co-workers
Implants	**Diff. People**
Diff. People	RPD Tx Plan
Oral Surg.	Dental Materials
Drug Interactions	Mgmt. Principles

NOTE: Highlighted (Bold) topics indicate topics of agreement.

Table 33
Commanders and Clinic Chiefs
Comparison of Topics Rank-Order
Based on Category of Topic

Clinical Dentistry n=58	
Commanders	Clinic Chiefs
Orofacial Infect.	Oral Surg.
Antibiotics	Orofacial Infect.
Oral Surg.	Antibiotics
Dentoalveolar Trauma	Impactions
Common Oral Lesions	Oral Path/Medicine
(ρ=.8798, p=.0001)	

Medically Related n=13	
Commanders	Clinic Chiefs
Medical Emergencies	Medical Emergencies
CPR	Medically Compromised
(ρ=.9256, p=.0001)	

Clinic Management n=7	
Commanders	Clinic Chiefs
Infection Control	Infection Control
Military Clinic Mgmt.	Military Clinic Mgmt.

*Spearman's Rank-order Correlation is unreliable when N < 10

Alternate Wartime Training n=14	
Commanders	Clinic Chiefs
Soft Tissue Wounds	Soft Tissue Wounds
Bleeding/Shock	Bleeding/Shock
(ρ.9382, p=.0001)	

Table 34
General Dentists
Comparison of Topics Rank-Order
Based on Category of Topic

Clinical Dentistry
n=58

63A9Ds	63A00s
Esthetics/Bonding	Orofacial Infect.
Ionomers	Impactions
Orofacial Infect.	Oral Surg.
Antibiotics	Antibiotics
Impactions	Dentoalveolar Trauma

(ρ.9382, p=.0001)

Medically Related
n=13

63A9Ds	63A00s
Medical Emerg.	Medical Emerg.
Mgmt. HIV+ Pt.	Mgmt. HIV+ Pt.

(ρ=.9560, p=.0001)

Clinic Management
n=7

63A9Ds	63A00s
Motivate Co-workers	Military Clinic Mgmt.
Military Clinic Mgmt.	Motivate Co-workers

*Spearman's Rank-order Correlation is unreliable when N < 10

Alternate Wartime Training
n=14

63A9Ds	63A00s
Maxillofacial Injuries	Maxillofacial Injuries
Soft Tissue Wounds	Soft Tissue Wounds

(ρ=.9780, p=.0001)

Table 35

Comparison of Clinical Dentistry Topics Rank-Order Based on Years of Experience
n=58

2 or Fewer Years

63A9Ds	63A00s
Esthetics/Bonding	Oral Surg.
Implants	Impactions
O/F Infect.	O/F Infect.
Impactions	Antibiotics
Oral Surg.	Esthetics/Bonding

(ρ=.8859, p=.0001)

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5 or Fewer Years

63A9Ds	63A00s
Esthetics/Bonding	Oral Surg.
Implants	Impactions
O/F Infect.	O/F Infect.
Impactions	Antibiotics
Oral Surg.	Esthetics/Bonding

(ρ=.9102, p=.0001)

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6 or More Years

63A9Ds	63A00s
Ionomers	O/F Infect.
Antibiotics	Antibiotics
Esthetics/Bonding	Impactions
O/F Infect.	Oral Surg.
Oral Path/Medicine	Esthetics/Bonding

(ρ=.9386, p=.0001)

Table 36

Comparison of Medically Related Topics Rank-Order Based on Years of Experience
n=13

2 or Fewer Years

63A9Ds	63A00s
Medical Emerg.	Medical Emerg.
Med. Lab Tests	Drug Interactions

(ρ=.8398, p=.0003)

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5 or Fewer Years

63A9Ds	63A00s
Medical Emerg.	Medical Emerg.
Mgmt. HIV+ Pt.	Med. Comp.

(ρ=.9341, p=.0001)

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6 or More Years

63A9Ds	63A00s
Medical Emerg.	Medical Emerg.
Med. Comp.	Med. Comp.

(ρ=.9945, p=.0001)

Table 37

Comparison of Clinical Management Topics Rank-Order Based on Years of Experience
n=7

2 or Fewer Years

63A9Ds	63A00s
Military Clinic Mgmt.	Motivate Co-workers
Mgmt. Principles	Difficult People

*Spearman's Rank-order Correlation is unreliable when N < 10

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5 or Fewer Years

63A9Ds	63A00s
Motivate Co-workers	Motivate Co-workers
Mgmt. Principles	Difficult People

*Spearman's Rank-order Correlation is unreliable when N < 10

---

6 or More Years

63A9Ds	63A00s
Military Clinic Mgmt.	Military Clinic Mgmt.
Motivate Co-workers	Infection Control

*Spearman's Rank-order Correlation is unreliable when N < 10

Table 38

Comparison of Alternate Wartime Training Topics Rank-Order Based on Years of Experience
n=14

2 or Fewer Years

63A9Ds	63A00s
Maxillofacial Injuries	Maxillofacial Injuries
Soft Tissue Wounds	Soft Tissue Wounds

(ρ=.8656, p=.0001)

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5 or Fewer Years

63A9Ds	63A00s
Maxillofacial Injuries	Maxillofacial Injuries
Soft Tissue Wounds	Soft Tissue Wounds

(ρ=.9769, p=.0001)

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6 or More Years

63A9Ds	63A00s
Maxillofacial Injuries	Maxillofacial Injuries
Soft Tissue Wounds	Soft Tissue Wounds

(ρ=.9571, p=.0001)

Table 39

A Comparison of Top Six Topics Based on Mean Composite Scores For Each of the Response Groups

Commanders	Clinic Chiefs
Medical Emerg.	Medical Emerg.
O/F Infect.	Oral Surg.
Antibiotics	O/F Infect.
Oral Surg.	Antibiotics
Infection Control	Infection Control
Soft Tiss. Wounds	Medical Comp.

63A9Ds	63A00s
Medical Emerg.	Medical Emerg.
Esthetics/Bonding	O/F Infect.
Ionomers	Impactions
O/F Infect.	Oral Surg.
Motivate Co-workers	Medical Comp.
Clinic Mgmt.	Antibiotics

Table 40

Logistic Regression Model[21]
Probability of Selecting Residency Training
As a Function of Years of Practice, Career Aspirations
Comparing 63A9Ds and 63A00s

Analysis of Maximum Likelihood Estimates
Logit Model

Variable	β	SE(β)	Odds Ratio	95% C.I.	χ^2	P
Constant	1.0624	.4120			6.6492	.0099
Yrs. Pract.	.1286	.0562	1.1372	(1.018,1.2697)	5.2466	.0220
Career	2.5743	1.0285	13.1220	(1.7479,98.51)	6.2648	.0123
1 Yr. GPR	.8598	.4569	2.3627	(.9649,5.7852)	3.5409	.0599

Probability of Selecting Advanced Training

Yrs. Pract.	Career	Probability 63A9D	Probability 63A00
1	Yes	.990	.977
1	No	.886	.767
3	Yes	.992	.982
3	No	.909	.809
6	Yes	.995	.988
6	No	.937	.862
9	Yes	.998	.992
9	No	.956	.902
12	Yes	.998	.931
12	No	.969	.994

Yrs. Pract.= Years of Dental Practice
Career = Dummy Variable; Coded 1 if "Definitely staying in" or "Leaning towards staying in" Coded 0 otherwise.
1 Yr. GPR = Dummy Variable; Coded 1 if respondent had General Practice Residency Coded 0 otherwise.

[21] SAS Procedures Guide, Release 6.03 Edition. SAS Institute, Inc. 1988. Proc Logist procedure for Logistic Regression.